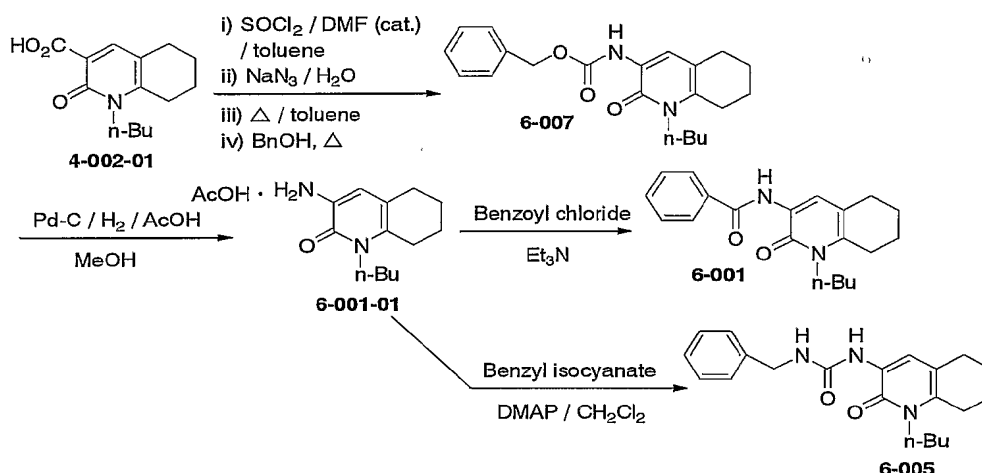


ーピリドン(5-004-02)(78 mg)のテトラヒドロフラン(2 mL)溶液を10分間で滴下し、一晚室温放置した。反応液を減圧留去し、得られた結晶をジクロルメタン／エーテルで再結晶し、4-(ベンゾオキサゾール-2-イルオキシ)-1-ベンジル-3-メトキシ-5,6-ジメチル-1*H*-ピリジン-2-オン(5-018)(142 mg, 89.9%)を得た。

融点：197-198℃

#### 実施例U



a) (1-ブチル-2-オキソ-1,2-5,6,7,8-ヘキサヒドロキノリン-3-イル)カルバミン酸ベンジルエステル(6-007)の合成

1-ブチル-2-オキソ-1,2-5,6,7,8-ヘキサヒドロキノリン-3-カルボン酸(4-002-01)(100 mg, 0.38 mmol)をトルエン(5 mL)に溶解し、塩化チオニル(57  $\mu\text{L}$ , 0.76 mmol)と触媒量のDMFを加え、75℃で30分間攪拌した。反応液を減圧濃縮し、残渣をアセトン(5 mL)に溶解した後、アジ化ナトリウム(29 mg, 0.42 mmol)水溶液(0.5 mL)を加え室温で15分間攪拌した。反応液に水(5 mL)を加え、酢酸エチル(10 mL)で抽出後、飽和食塩水(5 mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃縮した。残渣をトルエン(5 mL)に溶解し、120℃で30分間攪拌後、ベンジルアルコール(46  $\mu\text{L}$ , 0.44 mmol)を加え、さらに120℃で2時間反応させた。反応液をシリカゲルクロマトグラフィー(トルエ

ン／酢酸エチル)にて精製し、(1-ブチル-2-オキソ-1,2-5,6,7,8-ヘキサヒドロキノリン-3-イル)カルバミン酸ベンジルエステル(6-007)(90 mg, 63%)を白色泡状物質として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>): δ 0.96 (t, *J* = 7.5 Hz, 3H), 1.41 (sextet, *J* = 7.5 Hz, 2H), 1.63 (quint, *J* = 7.5 Hz, 2H), 1.70 (quint, *J* = 6.0 Hz, 2H), 1.83 (quint, *J* = 6.0 Hz, 2H), 2.53 (t, *J* = 6.0 Hz, 2H), 2.63 (t, *J* = 6.0 Hz, 2H), 4.01 (t, *J* = 7.8 Hz, 2H), 5.19 (s, 2H), 7.29-7.41 (m, 5H), 7.76 (s, 1H), 7.86 (brs, 1H).

b) 3-アミノ-1-ブチル-5,6,7,8-テトラヒドロ-1*H*-キノリン-2-オン 酢酸塩(6-001-01)の合成

(1-ブチル-2-オキソ-1,2-5,6,7,8-ヘキサヒドロキノリン-3-イル)カルバミン酸ベンジルエステル(6-007)(100 mg, 0.28 mmol)をメタノール(7 mL)に溶解し、酢酸(16 μL, 0.28 mmol)と10%パラジウム炭素(30 mg)を加え、水素雰囲気下1.5時間激しく攪拌した。パラジウム炭素をろ過、母液を減圧濃縮した後、結晶性残渣をヘキサンから再結晶して3-アミノ-1-ブチル-5,6,7,8-テトラヒドロ-1*H*-キノリン-2-オン 酢酸塩(6-001-01)(60 mg, 76%)を白色結晶として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>): δ 0.98 (t, *J* = 7.5 Hz, 3H), 1.43 (sextet, *J* = 7.5 Hz, 2H), 1.67 (quint, *J* = 7.5 Hz, 2H), 1.76 (quint, *J* = 6.0 Hz, 2H), 1.88 (quint, *J* = 6.0 Hz, 2H), 2.05 (s, 3H), 2.58 (t, *J* = 6.0 Hz, 2H), 2.67 (t, *J* = 6.0 Hz, 2H), 4.04 (t, *J* = 7.8 Hz, 2H), 8.27 (s, 1H).

c) N-(1-ブチル-2-オキソ-1,2,5,6,7,8-ヘキサヒドロキノリン-3-イル)ベンズアミド(6-001)の合成

3-アミノ-1-ブチル-5,6,7,8-テトラヒドロ-1*H*-キノリン-2-オン 酢酸塩(6-001-01)(5 mg, 0.018 mmol)を塩化メチレン(1 mL)に溶解し、ベンゾイルクロリド(2.3 μL, 0.02 mmol)とトリエチルアミン(5.6 μL, 0.04 mmol)を加え、室温で10分間攪拌した。反応液に0.1 N塩酸(3 mL)を加え酢酸エチル(10 mL)で抽出後、飽和食塩水(3 mL)で洗浄、無水硫酸マグネシウムで乾燥し

減圧濃縮した。得られた残渣をシリカゲルクロマトグラフィー(トルエン/酢酸エチル)にて精製し、N-(1-ブチル-2-オキソ-1,2,5,6,7,8-ヘキサヒドロキノリン-3-イル)ベンズアミド(6-001)(4.9 mg, 83%)を白色泡状物質として得た。

5  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.99 (t,  $J = 7.5$  Hz, 3H), 1.45 (sextet,  $J = 7.5$  Hz, 2H), 1.66 (quint,  $J = 7.5$  Hz, 2H), 1.74 (quint,  $J = 6.0$  Hz, 2H), 1.87 (quint,  $J = 6.0$  Hz, 2H), 2.60 (t,  $J = 6.0$  Hz, 2H), 2.69 (t,  $J = 6.0$  Hz, 2H), 4.06 (t,  $J = 7.8$  Hz, 2H), 7.43-7.56 (m, 3H), 7.94 (d,  $J = 6.9$  Hz, 2H), 8.31 (s, 1H), 9.26 (brs, 1H).

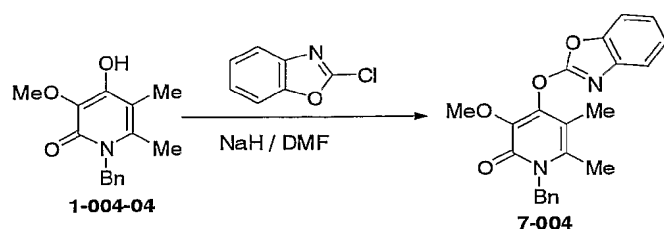
d) 1-ベンジル-3-(1-ブチル-2-オキソ-1,2,5,6,7,8-ヘキサヒドロキノリン-3-イル)ウレア(6-005)の合成

3-アミノ-1-ブチル-5,6,7,8-テトラヒドロ-1*H*-キノリン-2-オン 酢酸塩(6-001)(5 mg, 0.018 mmol)を塩化メチレン(1 mL)に溶解し、ベンジルイソシアナート(2.5  $\mu\text{L}$ , 0.02 mmol)と4-ジメチルアミノピリジン(2.4 mg, 0.02 mmol)を加え、室温で4時間攪拌した。反応液に0.1 N塩酸(3 mL)を加え  
15 酢酸エチル(10 mL)で抽出後、飽和食塩水(3 mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃縮した。得られた残渣をシリカゲルクロマトグラフィー(トルエン/酢酸エチル)にて精製し、ヘキサンから再結晶して1-ベンジル-3-(1-ブチル-2-オキソ-1,2,5,6,7,8-ヘキサヒドロキノリン-3-イル)ウレア(6-005)(5.0 mg, 79%)を白色結晶として得た。

20  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.92 (t,  $J = 7.5$  Hz, 3H), 1.32 (sextet,  $J = 7.5$  Hz, 2H), 1.57-1.65 (m, 2H), 1.69 (quint,  $J = 6.0$  Hz, 2H), 1.82 (quint,  $J = 6.0$  Hz, 2H), 2.55 (t,  $J = 6.0$  Hz, 2H), 2.59 (t,  $J = 6.0$  Hz, 2H), 3.90 (t,  $J = 7.8$  Hz, 2H), 4.46 (d,  $J = 6.0$  Hz, 2H), 5.72 (brs, 1H), 7.24-7.32 (m, 5H), 7.95 (s, 1H), 8.00 (brs, 1H).

25

実施例 V



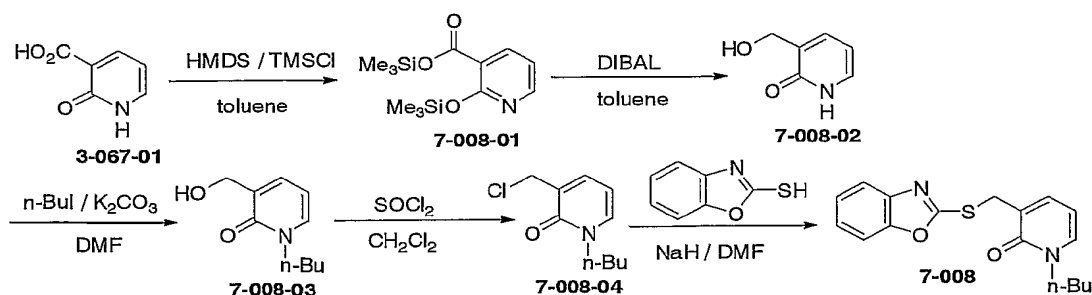
a) 1-(2-ブロモフェニル)-3-(1-ブチル-5,6-ジメチル-2-オキソ-1,2-ジヒドロピリジン-3-イル)ウレア(7-004)の合成

1-ベンジル-5,6-ジメチル-4-ヒドロキシ-3-メトキシ-2-ピリ  
 5 ドン(1-004-04) (259 mg)をDMF (3 mL)に溶解し、窒素気流中、室温攪拌下、6  
 0%水素化ナトリウム(48 mg)を一時に加え入れ、10分後2-クロロベンズオキ  
 サゾール(261 mg)のDMF (0.5 mL)溶液を加え、5時間攪拌後一晩室温放置した。  
 反応混合物を氷水中に注入し、酢酸エチルエステルで2回抽出し、水洗2回後、  
 硫酸マグネシウムで乾燥し、減圧留去した。得られた結晶性残渣(278mg, 73.9%)  
 10 をアセトン溶解し脱色炭処理後、エーテルを加え室温放置した。析出した結晶を  
 濾取し、1-(2-ブロモフェニル)-3-(1-ブチル-5,6-ジメチル-2-  
 オキソ-1,2-ジヒドロピリジン-3-イル)ウレア(7-004) (144 mg, 38.3%)  
 を無色プリズム晶として得た。

融点 154~155°C

15 <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>): δ 2.07 (s, 3H), 2.28 (s, 3H), 3.88 (s, 3H), 5.42 (brs,  
 2H), 7.19-7.54 (m, 9H).

#### 実施例W



20 a) 3-ヒドロキシメチル-2-(1H)-ピリドン(7-008-01)の合成

2-ヒドロキシニコチン酸(3-067-01) (5.0 g)のトルエン(70 mL) 溶液に、室温でヘキサメチルジシラザン(HMDS, 19 mL)、及びクロロトリメチルシラン(TMSCl, 0.23 mL)を加え加熱還流した。2時間攪拌後、溶媒を留去し、残渣にトルエン(100mL)を加えた。次に、水素化ジイソブチルアルミニウム(DIBAL, 2M 5 トルエン溶液、90 mL)を  $-78^{\circ}\text{C}$  で加え4時間攪拌後、メタノールを加えて反応を停止し、不溶物をセライトを用いて濾過した。減圧下で濾液を留去し、残渣に水と酢酸エチルを加え有機層を分離した後、水層を酢酸エチルで3回抽出した。合わせた有機層を水、飽和食塩水で順次洗い、無水硫酸マグネシウムで乾燥した。溶媒を減圧下で留去し、3-ヒドロキシメチル-2 (1H) -ピリドン(7-008-10 01)(2.6 g, 59%)を白色固体として得た。

$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  4.50 (s, 2H), 6.43 (t,  $J=6.7$  Hz, 1H), 7.33-7.36 (m, 1H), 7.64-7.67 (m, 1H).

b) 1-ブチル-3-ヒドロキシメチル-2-ピリドン(7-008-02)の合成

3-ヒドロキシメチル-2 (1H) -ピリドン(7-008-01)(0.63 g)のDMF (15 15 mL)溶液に、室温で炭酸カリウム(1.4 g)および1-ヨードブタン(1.86 g)を加えた。 $70^{\circ}\text{C}$  で2時間攪拌した後、溶媒を留去した。残渣に飽和塩化アンモニウム水溶液と酢酸エチルを加え、有機層を分離した後、水層を酢酸エチルで3回抽出した。合わせた有機相を水、飽和食塩水で順次洗い、無水硫酸マグネシウムで乾燥した。溶媒を減圧下で留去し、得られた粗生成物をカラムクロマトグラフィー(トルエン 20 /アセトン=2/1)で精製することにより1-ブチル-3-ヒドロキシメチル-2-ピリドン(7-008-02)(0.56 g, 61%)を油状物質として得た。

$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.96 (t,  $J=7.3$  Hz, 3H), 1.32-1.45 (m, 2H), 1.69-1.79 (m, 2H), 3.95 (t,  $J=7.6$  Hz, 2H), 4.57 (s, 2H), 6.20 (t,  $J=6.7$  Hz, 1H), 7.24 (dd,  $J=6.7, 1.2$  Hz, 1H), 7.28-7.31 (m, 1H).

c) 3-(ベンゾオキサゾール-2-イルオキシメチル)-1-ブチル-2-ピリドン(7-008-03)の合成

2-034-03と同様にして合成した(50%)。

d) 1-ブチル-3-クロロメチル-2-ピリドン(7-008-04)の合成

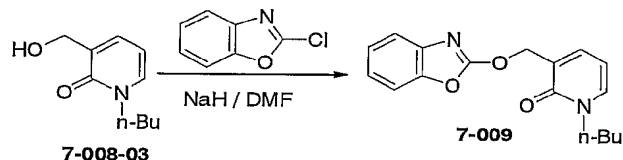
1-ブチル-3-ヒドロキシメチル-2-ピリドン(7-008-03)(169 mg)の塩化メチレン(4.0 mL)溶液に、室温で塩化チオニル(122 mg)を加えた。1時間攪拌した後、溶媒を留去し1-ブチル-3-クロロメチル-2-ピリドン(7-008-04)を  
5 油状物質として得た。

$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.96 (t,  $J = 7.3$  Hz, 3H), 1.32-1.45 (m, 2H), 1.69-1.79 (m, 2H), 3.96 (t,  $J = 7.3$  Hz, 2H), 6.19 (t,  $J = 6.7$  Hz, 1H), 7.27 (dd,  $J = 6.7, 2.1$  Hz, 1H), 7.49 -7.53 (m, 1H).

e) 3-(ベンゾオキサゾール-2-イルスルファニルメチル)-1-ブチル-  
10 2-ピリドン(7-008)の合成

2-035と同様にして合成した(97%)。

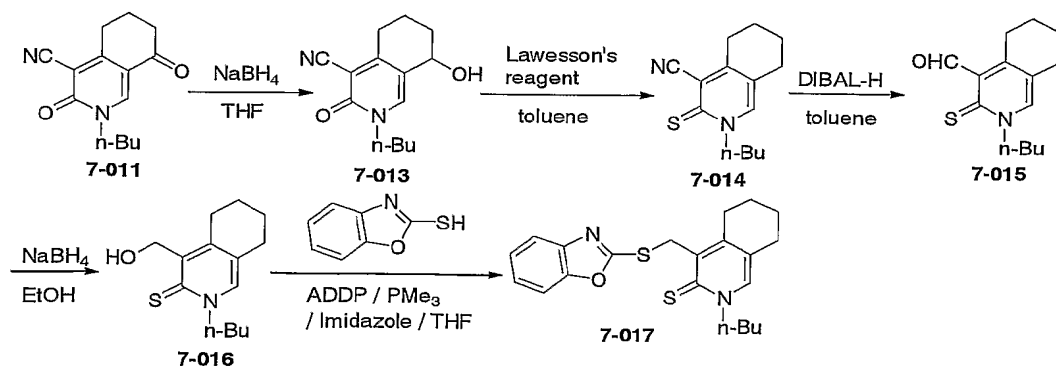
#### 実施例 X



15 a) 3-(ベンゾオキサゾール-2-イルオキシメチル)-1-ブチル-2-ピリドン(7-009)の合成

2-035と同様にして合成した(50%)。

#### 実施例 Y



a) 2-ブチル-8-ヒドロキシ-3-オキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノリン-4-カルボニトリル(7-013)の合成

2-ブチル-3, 8-ジオキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノリン-4-カルボニトリル(7-011)(10 mg, 0.04 mmol)をTHF(1 mL)に溶解し、水素化ホウ素ナトリウム(2.1 mg, 0.056 mmol)を加え、室温で10分間攪拌した。反応液に1N塩酸(3 mL)を加え酢酸エチル(10 mL)で抽出後、飽和食塩水(5 mL)で洗浄、無水硫酸マグネシウムで乾燥し、減圧濃縮した。得られた結晶性残渣を塩化メチレンから再結晶し、2-ブチル-8-ヒドロキシ-3-オキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノリン-4-カルボニトリル(7-013)(7.4 mg, 75%)を白色結晶として得た。

$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.97 (t,  $J = 7.5$  Hz, 3H), 1.38 (sextet,  $J = 7.5$  Hz, 2H), 1.76 (quint,  $J = 7.5$  Hz, 2H), 2.15 (quint,  $J = 6.0$  Hz, 2H), 2.61 (t,  $J = 6.0$  Hz, 2H), 3.06 (t,  $J = 6.0$  Hz, 2H), 3.45-3.58 (m, 1H), 4.03 (t,  $J = 7.5$  Hz, 2H), 8.39 (s, 1H).

b) 2-ブチル-3-チオキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノリン-4-カルボニトリル(7-014)の合成

2-ブチル-3-オキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノリン-4-カルボニトリル(7-012)(80 mg, 0.35 mmol)をトルエン(8 mL)に溶解し、ローソン試薬(169 mg, 0.42 mmol)を加え、12時間加熱還流した。室温まで冷却後、メタノール(14 mL)を加え1時間室温で攪拌し、反応液を減圧濃縮した。得られた残渣をシリカゲルクロマトグラフィー (トルエン/酢酸エチル)にて精製し、2-ブチル-3-チオキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノリン-4-カルボニトリル(7-014)(63 mg, 73%)を淡褐色粉末として得た。

$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.98 (t,  $J = 7.5$  Hz, 3H), 1.41 (sextet,  $J = 7.5$  Hz, 2H), 1.75-1.90 (m, 6H), 2.60 (t,  $J = 6.3$  Hz, 2H), 2.87 (t,  $J = 6.3$  Hz, 2H), 4.81 (t,  $J = 7.5$  Hz, 2H), 7.50 (s, 1H).

c) 2-ブチル-3-チオキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノ

ノリンー４ーカルボアルデヒド(7-015)の合成

2-ブチル-3-チオキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノ  
リン-4-カルボニトリル(7-014)(220 mg, 0.89 mmol)をトルエン(20 mL)に溶  
解し、氷冷下、水素化ジイソブチルアルミニウム(1 Mトルエン溶液, 1.7 mL, 1.7  
5 mmol)を加え 30 分攪拌した。反応液に 1 N 希塩酸(5 mL)を加え、酢酸エチル(10  
mL)で抽出後、飽和食塩水(10 mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃  
縮する。得られた残渣をシリカゲルクロマトグラフィー (トルエン/酢酸エチル)  
にて精製し、2-ブチル-3-チオキソ-2, 3, 5, 6, 7, 8-ヘキサヒド  
ロイソキノリン-4-カルボアルデヒド(7-015)(44 mg, 20%)を淡褐色結晶とし  
10 て得た。

$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.99 (t,  $J = 7.5$  Hz, 3H), 1.44 (sextet,  $J = 7.5$  Hz, 2H), 1.74 (quint,  $J = 3.3$  Hz, 4H), 1.87 (quint,  $J = 7.5$  Hz, 2H), 2.62 (br t,  $J = 6.3$  Hz, 2H), 2.95 (brt,  $J = 6.3$  Hz, 2H), 4.51 (t,  $J = 7.5$  Hz, 2H), 7.53 (s, 1H), 10.60 (s, 1H).

15 d) 2-ブチル-4-ヒドロキシメチル-5, 6, 7, 8, -テトラヒドロ-2  
H-イソキノリン-3-チオン(7-016)の合成

2-ブチル-3-チオキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノ  
リン-4-カルボアルデヒド(7-015)(10 mg, 0.04 mmol)をメタノール(2 mL)に溶  
解し、水素化ホウ素ナトリウム(4.6 mg, 0.12 mmol)を加え室温で 10 分間攪拌し  
20 た。反応液に 1 N 塩酸(4 mL)を加え酢酸エチル(10 mL)で抽出後、飽和食塩水(5  
mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃縮した。得られた残渣をシリ  
カゲルクロマトグラフィー (トルエン/酢酸エチル)で精製し、2-ブチル-4-  
ヒドロキシメチル-5, 6, 7, 8, -テトラヒドロ-2 H-イソキノリン-3  
-チオン(7-016)(9 mg, 90%)を淡褐色粉末として得た。

25  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.99 (t,  $J = 7.2$  Hz, 3H), 1.43 (sextet,  $J = 7.2$  Hz, 2H), 1.71-1.95 (m, 6H), 2.66 (brt,  $J = 6.3$  Hz, 2H), 2.83 (t,  $J = 6.3$  Hz, 2H), 4.58 (brt,  $J = 7.2$  Hz, 2H), 4.79 (s, 2H), 7.61 (s, 1H).

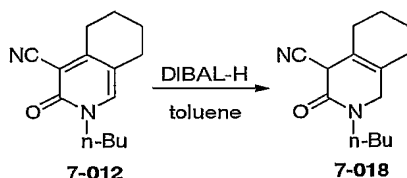


e) 4-(ベンゾオキサゾール-2-イルチオメチル)-2-ブチル-5, 6, 7, 8-テトラヒドロ-2*H*-イソキノリン-3-チオン(7-017)の合成

2-ブチル-4-ヒドロキシメチル-5, 6, 7, 8-テトラヒドロ-2*H*-イソキノリン-3-チオン(7-016)(14 mg, 0.056 mmol)を THF(1 mL)に溶解し、  
 5 2-メルカプトベンゾオキサゾール(16.3 mg, 0.11 mmol)、1, 1'- (アゾジカルボニル) ジピペリジン(28.1 mg, 0.11 mmol)、イミダゾール(7.6 mg, 0.11 mmol)、トリメチルホスフィン(1 Mトルエン溶液, 0.11 mL, 0.11 mmol)をそれぞれ加え、室温で18時間攪拌した。反応液を減圧濃縮しトルエン(2 mL)を加え析出してくる不溶物をろ過後、母液をシリカゲルクロマトグラフィー (トルエン/酢酸エチル)で精製し、4-(ベンゾオキサゾール-2-イルチオメチル)-2-ブチル-5, 6, 7, 8-テトラヒドロ-2*H*-イソキノリン-3-チオン(7-017)(6.5 mg, 30%)を淡褐色粉末として得た。

<sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>): δ 0.99 (t, *J* = 7.5 Hz, 3H), 1.43 (sextet, *J* = 7.5 Hz, 2H), 1.70-1.95 (m, 6H), 2.62 (t, *J* = 6.3 Hz, 2H), 3.01 (t, *J* = 6.3 Hz, 2H), 4.58 (t, *J* = 7.5 Hz, 2H), 5.05 (s, 2H), 7.15-7.30 (m, 2H), 7.42 (dd, *J* = 7.2 Hz, *J* = 1.8 Hz, 1H), 7.48 (brs, 1H), 7.60 (dd, *J* = 7.2 Hz, *J* = 1.8 Hz, 1H).

#### 実施例 Z



a) 2-ブチル-3-オキソ-1, 2, 3, 4, 5, 6, 7, 8-オクタヒドロイソキノリン-4-カルボニトリル(7-018)の合成

2-ブチル-3-オキソ-2, 3, 5, 6, 7, 8-ヘキサヒドロイソキノリン-4-カルボニトリル(7-012)(100 mg, 0.43 mmol)をトルエン(10 mL)に溶解し、氷冷下、水素化ジイソブチルアルミニウム(1 Mトルエン溶液, 0.8 mL, 0.8 mmol)を加え10分間攪拌した。反応液に1 N塩酸(5 mL)を加え酢酸エチル(10  
 25 mL)を加え10分間攪拌した。反応液に1 N塩酸(5 mL)を加え酢酸エチル(10

mL)で抽出後、飽和食塩水(5 mL)で洗浄、無水硫酸マグネシウムで乾燥し減圧濃縮した。得られた残渣をシリカゲルクロマトグラフィー (トルエン／酢酸エチル)にて精製し、2-ブチル-3-オキソ-1, 2, 3, 4, 5, 6, 7, 8-オクタヒドロイソキノリン-4-カルボニトリル(7-018)(70 mg, 70%)を白色粉末として得た。

$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ):  $\delta$  0.93 (t,  $J = 7.5$  Hz, 3H), 1.32 (sextet,  $J = 7.5$  Hz, 2H), 1.42-1.59 (m, 5H), 1.88 (s, 1H), 1.97-2.08 (m, 2H), 2.20-2.32 (m, 1H), 2.54-2.66 (m, 1H), 3.06-3.19 (m, 2H), 3.33-3.43 (m, 3H).

10 上記実施例と同様にして、以下の表に示される化合物を合成した。なお、表中の左カラムの数字は化合物No.を表わす。

表 1

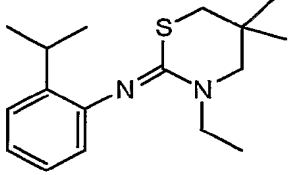
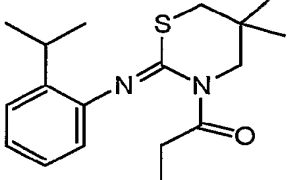
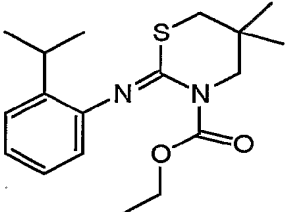
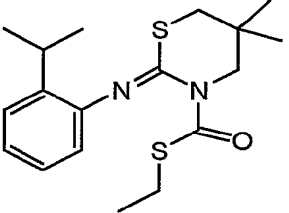
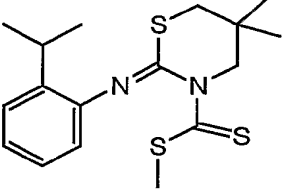
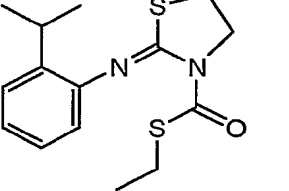
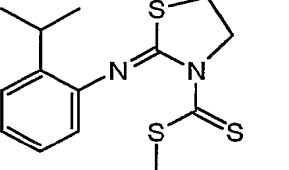
	構造式	物性値
I-1		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.13 (6H, s), 1.20 (6H, d, $J = 6.9$ ), 1.25 (3H, t, $J = 7.4$ ), 2.61 (2H, s), 3.05 (2H, s), 3.17 (1H, m), 3.64 (2H, q, $J = 6.9$ ), 6.72-6.80 (1H, m), 6.98-7.07 (2H, m), 7.20-7.32 (1H, m).
I-2		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.14 (6H, s), 1.20 (6H, d, $J = 6.9$ ), 1.22 (3H, t, $J = 7.4$ ), 2.60 (2H, s), 2.95 (2H, q, $J = 7.4$ ), 2.96 (1H, q, $J = 6.9$ ), 3.73 (2H, s), 6.73-6.78 (1H, m), 7.10-7.17 (2H, m), 7.25-7.32 (1H, m).
I-3		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.16 (6H, s), 1.21 (6H, d, $J = 6.9$ ), 1.36 (3H, t, $J = 7.1$ ), 2.59 (2H, s), 3.17 (1H, q, $J = 6.9$ ), 3.65 (2H, s), 4.32 (2H, q, $J = 7.1$ ), 6.74-6.78 (1H, m), 7.12-7.16 (2H, m), 7.30-7.36 (1H, m).
I-4		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.16 (6H, s), 1.21 (6H, d, $J = 6.9$ ), 1.36 (3H, t, $J = 7.1$ ), 2.63 (2H, s), 2.89 (2H, q, $J = 7.1$ ), 3.15 (1H, q, $J = 6.9$ ), 3.77 (2H, s), 6.79-6.85 (1H, m), 7.12-7.16 (2H, m), 7.30-7.36 (1H, m).
I-5		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.20 (6H, d, $J = 6.9$ ), 1.23 (6H, s), 2.65 (3H, s), 2.68 (2H, s), 3.11 (1H, q, $J = 6.9$ ), 4.51 (2H, s), 6.83-6.90 (1H, m), 7.11-7.18 (2H, m), 7.28-7.35 (1H, m).
I-6		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.20 (6H, d, $J = 6.9$ ), 1.30 (3H, t, $J = 7.4$ ), 2.90 (2H, t, $J = 7.4$ ), 3.15 (2H, t, $J = 7.4$ ), 3.20 (1H, q, $J = 6.9$ ), 4.31 (2H, t, $J = 7.4$ ), 6.79-6.82 (1H, m), 7.07-7.16 (2H, m), 7.28-7.32 (1H, m).
I-7		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.23 (6H, d, $J = 6.9$ ), 2.65 (3H, s), 2.90 (2H, t, $J = 7.4$ ), 3.20 (1H, q, $J = 6.9$ ), 4.45 (2H, t, $J = 7.4$ ), 6.79-6.82 (1H, m), 7.07-7.16 (2H, m), 7.28-7.32 (1H, m).

表 2

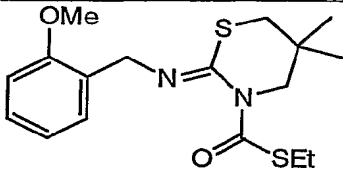
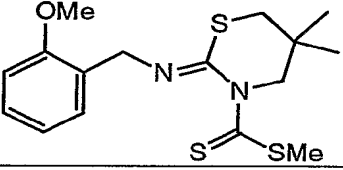
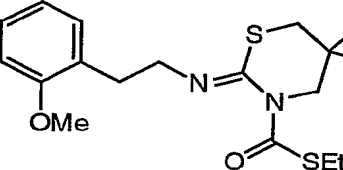
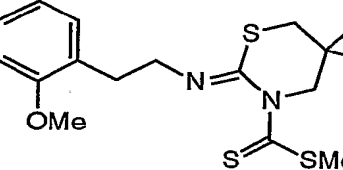
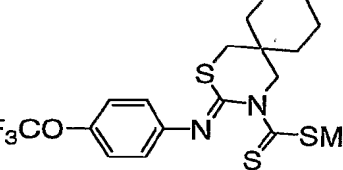
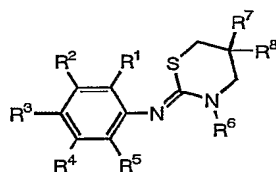
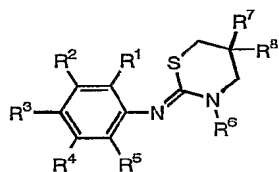
	構造式	物性値
I-8		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.15 (6H, s), 1.25 (3H, t, $J = 7.4$ ), 2.69 (2H, s), 2.83 (2H, q, $J = 7.4$ ), 3.69 (2H, s), 3.84 (3H, s), 4.61 (2H, s), 6.86 (1H, d, $J = 8.2$ ), 6.96 (1H, t, $J = 8.2$ ), 7.26 (1H, t, $J = 8.2$ ), 7.55 (1H, t, $J = 8.2$ ).
I-9		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.25 (6H, s), 2.56 (3H, s), 2.72 (2H, s), 3.85 (3H, s), 4.43 (2H, s), 4.63 (2H, s), 6.86-6.88 (2H, m), 7.20-7.30 (1H, m), 7.44-7.48 (1H, m).
I-10		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.11 (6H, s), 1.26 (3H, t, $J = 7.4$ ), 2.61 (2H, s), 2.83 (2H, q, $J = 7.4$ ), 2.99-3.05 (2H, m), 3.61-3.66 (2H, m), 3.62 (2H, s), 3.82 (3H, s), 6.86-6.91 (2H, m), 7.17-7.26 (2H, m).
I-11		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.19 (6H, s), 2.55 (3H, s), 2.64 (2H, s), 3.05 (2H, t, $J = 7.5$ ), 3.66 (2H, t, $J = 7.5$ ), 3.84 (3H, s), 4.35 (2H, s), 6.84-6.91 (2H, m), 7.17-7.30 (2H, m).
I-12		$^1\text{H-NMR}$ ( $\delta$ ppm TMS / $\text{CDCl}_3$ ) 1.35-1.67 (8H, m), 1.74-1.86 (2H, m), 2.64 (3H, s), 2.68 (2H, s), 4.56 (2H, s), 7.02-7.07 (2H, m), 7.22 (2H, d, $J = 8.2$ Hz).

表 3



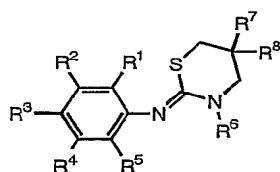
	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-16	H	H	H	H	H	COSEt	Me	Me
I-17	F	H	H	H	H	COSEt	Me	Me
I-18	Cl	H	H	H	H	COSEt	Me	Me
I-19	Me	H	H	H	H	COSEt	Me	Me
I-20	Et	H	H	H	H	COSEt	Me	Me
I-21	Pr	H	H	H	H	COSEt	Me	Me
I-22	Bu	H	H	H	H	COSEt	Me	Me
I-23	Bu <sup>s</sup>	H	H	H	H	COSEt	Me	Me
I-24	Bu <sup>t</sup>	H	H	H	H	COSEt	Me	Me
I-25	Ph	H	H	H	H	COSEt	Me	Me
I-26	CF <sub>3</sub>	H	H	H	H	COSEt	Me	Me
I-27	OMe	H	H	H	H	COSEt	Me	Me
I-28	OEt	H	H	H	H	COSEt	Me	Me
I-29	OPr <sup>i</sup>	H	H	H	H	COSEt	Me	Me
I-30	SMe	H	H	H	H	COSEt	Me	Me
I-31	SEt	H	H	H	H	COSEt	Me	Me
I-32	SPr <sup>i</sup>	H	H	H	H	COSEt	Me	Me
I-33	NMe <sub>2</sub>	H	H	H	H	COSEt	Me	Me
I-34	H	Pr <sup>i</sup>	H	H	H	COSEt	Me	Me
I-35	H	H	Cl	H	H	COSEt	Me	Me
I-36	H	H	Pr <sup>i</sup>	H	H	COSEt	Me	Me
I-37	H	H	NO <sub>2</sub>	H	H	COSEt	Me	Me
I-38	Me	Me	H	H	H	COSEt	Me	Me
I-39	Me	H	Me	H	H	COSEt	Me	Me
I-40	Me	H	H	Me	H	COSEt	Me	Me
I-41	Me	H	H	H	Me	COSEt	Me	Me
I-42	H	Me	Me	H	H	COSEt	Me	Me
I-43	H	Me	H	Me	H	COSEt	Me	Me
I-44	Me	H	Cl	H	H	COSEt	Me	Me

表 4



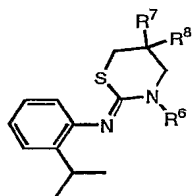
	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-45	Cl	H	Me	H	H	COSEt	Me	Me
I-46	Pr <sup>i</sup>	H	NO <sub>2</sub>	H	H	COSEt	Me	Me
I-47	Pr <sup>i</sup>	H	H	H	NO <sub>2</sub>	COSEt	Me	Me
I-48	NO <sub>2</sub>	H	NO <sub>2</sub>	H	H	COSEt	Me	Me
I-49	Pr	H	H	H	H	COSMe	Me	Me
I-50	Pr <sup>i</sup>	H	H	H	H	COSMe	Me	Me
I-51	Bu <sup>s</sup>	H	H	H	H	COSMe	Me	Me
I-52	H	Pr <sup>i</sup>	H	H	H	COSMe	Me	Me
I-53	H	OMe	OMe	H	H	COSMe	Me	Me
I-54	H	-OCH <sub>2</sub> O-		H	H	COSMe	Me	Me
I-55	H	OMe	OMe	OMe	H	COSMe	Me	Me
I-56	Et	H	H	H	H	CSSMe	Me	Me
I-57	Bu <sup>s</sup>	H	H	H	H	CSSMe	Me	Me
I-58	CH <sub>2</sub> OMe	H	H	H	H	CSSMe	Me	Me
I-59	CH(Me)OMe	H	H	H	H	CSSMe	Me	Me
I-60	OMe	H	H	H	H	CSSMe	Me	Me
I-61	OEt	H	H	H	H	CSSMe	Me	Me
I-62	SMe	H	H	H	H	CSSMe	Me	Me
I-63	SEt	H	H	H	H	CSSMe	Me	Me
I-64	SPr <sup>i</sup>	H	H	H	H	CSSMe	Me	Me
I-65	SOMe	H	H	H	H	CSSMe	Me	Me
I-66	SO <sub>2</sub> Me	H	H	H	H	CSSMe	Me	Me
I-67	SOEt	H	H	H	H	CSSMe	Me	Me
I-68	NMe <sub>2</sub>	H	H	H	H	CSSMe	Me	Me
I-69	H	Pr <sup>i</sup>	H	H	H	CSSMe	Me	Me
I-70	H	H	Cl	H	H	CSSMe	Me	Me

表 5



	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-71	Me	H	Me	H	H	CSSMe	Me	Me
I-72	Me	H	H	Me	H	CSSMe	Me	Me
I-73	Me	H	H	H	Me	CSSMe	Me	Me
I-74	H	Me	Me	H	H	CSSMe	Me	Me
I-75	H	Me	H	Me	H	CSSMe	Me	Me
I-76	OMe	OMe	H	H	H	CSSMe	Me	Me
I-77	H	OMe	OMe	H	H	CSSMe	Me	Me
I-78	OMe	H	H	OMe	H	CSSMe	Me	Me
I-79	OMe	H	OMe		H	CSSMe	Me	Me
I-80	H	-OCH <sub>2</sub> O-		H	H	CSSMe	Me	Me
I-81	Pr <sup>i</sup>	H	NO <sub>2</sub>	H	H	CSSMe	Me	Me
I-82	Pr <sup>i</sup>	H	H	H	NO <sub>2</sub>	CSSMe	Me	Me
I-83	H	OMe	OMe	OMe	H	CSSMe	Me	Me
I-84	Pr <sup>i</sup>	H	H	H	H	CSSEt	Me	Me
I-85	Bu <sup>s</sup>	H	H	H	H	CSSEt	Me	Me
I-86	OEt	H	H	H	H	CSSEt	Me	Me
I-87	SMe	H	H	H	H	CSSEt	Me	Me
I-88	H	Pr <sup>i</sup>	H	H	H	CSSEt	Me	Me
I-118	H	OEt	OEt	H	H	CSSMe	Me	Me
I-119	OMe	H	Me	H	H	CSSMe	Me	Me
I-120	OMe	H	H	Me	H	CSSMe	Me	Me
I-121	H	OMe	Me	H	H	CSSMe	Me	Me
I-122	Me	Me	H	H	H	CSSMe	Me	Me
I-123	N(Me)Ac	H	H	H	H	CSSMe	Me	Me

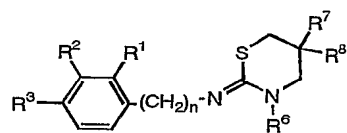
表 6



	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-89	COPr	Me	Me
I-90	COOMe	Me	Me
I-91	COOPr	Me	Me
I-92	CONHEt	Me	Me
I-93	COCH <sub>2</sub> OMe	Me	Me
I-94	COCH <sub>2</sub> SMe	Me	Me
I-95	COCH <sub>2</sub> SEt	Me	Me
I-96	CSOEt	Me	Me
I-97	CSNHEt	Me	Me
I-98	CSSPr	Me	Me
I-99	CSSPr <sup>i</sup>	Me	Me
I-100	CSSBn	Me	Me

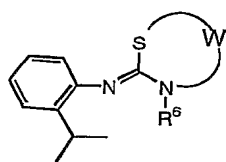


表 7



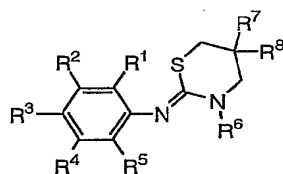
	$R^1$	$R^2$	$R^3$	$n$	$R^6$	$R^7$	$R^8$
I-101	H	H	Cl	1	COSEt	Me	Me
I-102	H	H	Cl	1	CSSMe	Me	Me
I-103	Cl	H	Cl	2	COSEt	Me	Me
I-104	Cl	H	Cl	2	CSSMe	Me	Me

表 8



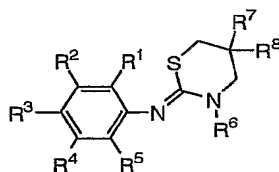
	$R^6$	W
I-105	COSEt	
I-106	COSEt	
I-107	COSEt	
I-108	COSEt	
I-109	COSEt	
I-110	COSEt	
I-111	COSEt	
I-112	COSEt	
I-113	CSSMe	
I-114	CSSMe	
I-115	CSSMe	
I-116	CSSMe	
I-117	CSSMe	

表 9



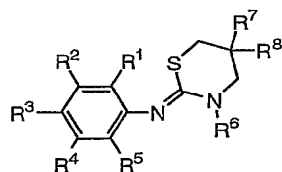
	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-124	H	H	OEt	H	H	CSSMe	Me	Me
I-125	H	OEt	H	H	H	CSSMe	Me	Me
I-126	H	H	OMe	H	H	CSSMe	Me	Me
I-127	H	OMe	H	H	H	CSSMe	Me	Me
I-128	H	OEt	OMe	H	H	CSSMe	Me	Me
I-129	H	OPr	OMe	H	H	CSSMe	Me	Me
I-130	H	OEt	OEt	H	H	CSSMe	Me	Me
I-131	H	H	OPr	H	H	CSSMe	Me	Me
I-132	H	OPr	H	H	H	CSSMe	Me	Me
I-133	H	H	OBu	H	H	CSSMe	Me	Me
I-134	H	OBu	H	H	H	CSSMe	Me	Me
I-135	H	OMe	OEt	H	H	CSSMe	Me	Me
I-136	H	OMe	OPr	H	H	CSSMe	Me	Me
I-137	H	OBu	OMe	H	H	CSSMe	Me	Me
I-138	H	H	OPr <sup>i</sup>	H	H	CSSMe	Me	Me
I-139	H	OPr <sup>i</sup>	H	H	H	CSSMe	Me	Me
I-140	H	H	H	H	H	CSSMe	Me	Me
I-141	F	H	H	H	H	CSSMe	Me	Me
I-142	Cl	H	H	H	H	CSSMe	Me	Me
I-143	H	Cl	H	H	H	CSSMe	Me	Me
I-144	Me	H	H	H	H	CSSMe	Me	Me
I-145	H	Me	H	H	H	CSSMe	Me	Me
I-146	H	H	Me	H	H	CSSMe	Me	Me
I-147	H	Bu	H	H	H	CSSMe	Me	Me
I-148	H	H	Bu	H	H	CSSMe	Me	Me

表 1 0



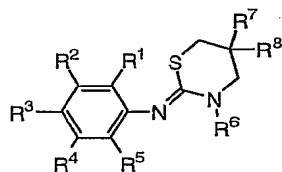
	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-149	Bu <sup>t</sup>	H	H	H	H	CSSMe	Me	Me
I-150	H	H	Et	H	H	CSSMe	Me	Me
I-151	H	Et	H	H	H	CSSMe	Me	Me
I-152	H	H	F	H	H	CSSMe	Me	Me
I-153	H	F	H	H	H	CSSMe	Me	Me
I-154	H	H	Pr <sup>i</sup>	H	H	CSSMe	Me	Me
I-155	H	H	Morpho lino	H	H	CSSMe	Me	Me
I-156	H	Ac	H	H	H	CSSMe	Me	Me
I-157	H	H	Br	H	H	CSSMe	Me	Me
I-158	H	Br	H	H	H	CSSMe	Me	Me
I-159	Br	H	H	H	H	CSSMe	Me	Me
I-160	H	C(Me)= NOMe	H	H	H	CSSMe	Me	Me
I-161	H	H	Ac	H	H	CSSMe	Me	Me
I-162	H	H	C(Me)= NOMe	H	H	CSSMe	Me	Me
I-163	OPr <sup>i</sup>	H	H	H	H	CSSMe	Me	Me
I-164	Pr	H	H	H	H	CSSMe	Me	Me
I-165	CF <sub>3</sub>	H	H	H	H	CSSMe	Me	Me
I-166	H	H	OPh	H	H	CSSMe	Me	Me
I-167	H	H	Pr	H	H	CSSMe	Me	Me
I-168	H	H	Bu <sup>t</sup>	H	H	CSSMe	Me	Me
I-169	H	CF <sub>3</sub>	H	H	H	CSSMe	Me	Me
I-170	H	H	CF <sub>3</sub>	H	H	CSSMe	Me	Me
I-171	Pr <sup>i</sup>	H	NHAc	H	H	CSSMe	Me	Me
I-172	Pr <sup>i</sup>	H	H	H	NHAc	CSSMe	Me	Me
I-173	H	COOMe	H	H	OMe	CSSMe	Me	Me

表 1 1



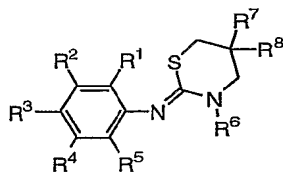
	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-174	Morpholino	H	H	H	H	CSSMe	Me	Me
I-175	H	Morpholino	H	H	H	CSSMe	Me	Me
I-176	Pr <sup>i</sup>	H	H	COOEt	H	CSSMe	Me	Me
I-177	H	H	Piperidino	H	H	CSSMe	Me	Me
I-178	Pyrrolidino	H	H	H	H	CSSMe	Me	Me
I-179	H	SMe	H	H	H	CSSMe	Me	Me
I-180	H	H	SMe	H	H	CSSMe	Me	Me
I-181	OCF <sub>3</sub>	H	H	H	H	CSSMe	Me	Me
I-182	H	OCF <sub>3</sub>	H	H	H	CSSMe	Me	Me
I-183	H	H	OCF <sub>3</sub>	H	H	CSSMe	Me	Me
I-184	H	H	3-Pyridyl	H	H	CSSMe	Me	Me
I-185	H	3-Pyridyl	H	H	H	CSSMe	Me	Me
I-186	3-Pyridyl	H	H	H	H	CSSMe	Me	Me
I-187	OPh	H	H	H	H	CSSMe	Me	Me
I-188	H	OEt	OEt	H	H	COOMe	Me	Me
I-189	OMe	H	H	H	H	COOMe	Me	Me
I-190	H	H	Et	H	H	COOMe	Me	Me
I-191	H	H	Pr <sup>i</sup>	H	H	COOMe	Me	Me
I-192	OMe	H	H	H	H	COSMe	Me	Me
I-193	H	H	Et	H	H	COSMe	Me	Me
I-194	H	H	Pr <sup>i</sup>	H	H	COSMe	Me	Me
I-195	H	H	OEt	H	H	COSMe	Me	Me
I-196	H	OMe	OEt	H	H	COSMe	Me	Me
I-197	H	Piperidino	H	H	H	CSSMe	Me	Me
I-198	H	H	NEt <sub>2</sub>	H	H	CSSMe	Me	Me

表 1 2



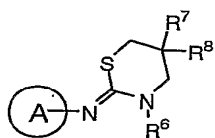
	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-199	OMe	H	COOMe	H	H	CSSMe	Me	Me
I-200	H	2-Oxopyrrolidino	H	H	H	CSSMe	Me	Me
I-201	H	OPh	H	H	H	CSSMe	Me	Me
I-202	H	H	Ph	H	H	CSSMe	Me	Me
I-203	Ph	H	H	H	H	CSSMe	Me	Me
I-204	H	Ph	H	H	H	CSSMe	Me	Me
I-205	Pr <sup>i</sup>	H	H	H	H	CSOMe	Me	Me
I-206	Pr <sup>i</sup>	H	I	H	H	CSSMe	Me	Me
I-207	OMe	H	(Morpholino)CO	H	H	CSSMe	Me	Me
I-208	H	H	NMe <sub>2</sub>	H	H	CSSMe	Me	Me
I-209	H	NMe <sub>2</sub>	H	H	H	CSSMe	Me	Me
I-210	N(Me)Et	H	H	H	H	CSSMe	Me	Me
I-211	N(Me)Pr	H	H	H	H	CSSMe	Me	Me
I-212	NEt <sub>2</sub>	H	H	H	H	CSSMe	Me	Me
I-213	F	H	H	H	F	CSSMe	Me	Me
I-214	Pr <sup>i</sup>	H	Cl	H	H	CSSMe	Me	Me
I-215	NMe <sub>2</sub>	Me	H	H	H	CSSMe	Me	Me
I-216	NMe <sub>2</sub>	H	Me	H	H	CSSMe	Me	Me
I-217	NMe <sub>2</sub>	H	H	Me	H	CSSMe	Me	Me
I-218	NMe <sub>2</sub>	H	H	Cl	H	CSSMe	Me	Me
I-219	Me	H	H	H	Me	CSSMe	Me	Me
I-220	NMe <sub>2</sub>	H	H	H	H	CSSEt	Me	Me
I-221	H	NMe <sub>2</sub>	H	H	H	CSSEt	Me	Me
I-222	NMe <sub>2</sub>	H	Me	H	H	CSSEt	Me	Me
I-223	H	H	Pr <sup>i</sup>	H	H	CSSEt	Me	Me

表 1 3



	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-224	OMe	H	CONHMe	H	H	CSSMe	Me	Me
I-225	OCHF <sub>2</sub>	H	H	H	H	CSSMe	Me	Me
I-226	H	OCHF <sub>2</sub>	H	H	H	CSSMe	Me	Me
I-227	H	NEt <sub>2</sub>	H	H	H	CSSMe	Me	Me
I-228	NMe <sub>2</sub>	H	Cl	H	H	CSSMe	Me	Me
I-229	NMe <sub>2</sub>	H	F	H	H	CSSMe	Me	Me
I-230	NMe <sub>2</sub>	H	H	F	H	CSSMe	Me	Me
I-231	NMe <sub>2</sub>	H	Et	H	H	CSSMe	Me	Me
I-232	NMe <sub>2</sub>	H	H	Et	H	CSSMe	Me	Me
I-233	NMe <sub>2</sub>	H	Cl	H	H	CSSEt	Me	Me
I-234	NMe <sub>2</sub>	H	F	H	H	CSSEt	Me	Me
I-235	NMe <sub>2</sub>	H	Et	H	H	CSSEt	Me	Me
I-236	Pr <sup>i</sup>	H	H	H	H	CSSBu <sup>s</sup>	Me	Me
I-237	Pr <sup>i</sup>	H	H	H	H	CSSBu <sup>i</sup>	Me	Me
I-238	Pr <sup>i</sup>	H	H	H	H	CSNHMe	Me	Me
I-239	Me	NMe <sub>2</sub>	H	H	H	CSSMe	Me	Me
I-240	NMe <sub>2</sub>	OMe	H	H	H	CSSMe	Me	Me
I-241	H	NMe <sub>2</sub>	Me	H	H	CSSMe	Me	Me
I-242	NMe <sub>2</sub>	Cl	H	H	H	CSSMe	Me	Me
I-243	H	NMe <sub>2</sub>	OMe	H	H	CSSMe	Me	Me
I-244	Pr <sup>i</sup>	H	H	H	H	CSSEt	Et	Et
I-245	Pr <sup>i</sup>	H	H	H	H	Me	Me	Me
I-246	Pr <sup>i</sup>	H	H	H	H	Pr	Me	Me
I-247	Pr <sup>i</sup>	H	H	H	H	Pr <sup>i</sup>	Me	Me
I-248	Pr <sup>i</sup>	H	H	H	H	Bu <sup>i</sup>	Me	Me

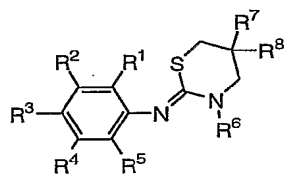
表 1 4



	A	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-249		CSSMe	Me	Me
I-250		CSSMe	Me	Me
I-251		CSSMe	Me	Me
I-252		CSSMe	Me	Me
I-253		CSSMe	Me	Me
I-254		CSSMe	Me	Me
I-255		CSSMe	Me	Me
I-256		CSSMe	Me	Me
I-257		CSSMe	Me	Me
I-258		CSSMe	Me	Me
I-259		CSSMe	Me	Me
I-260		CSSMe	Me	Me
I-261		CSSMe	Me	Me

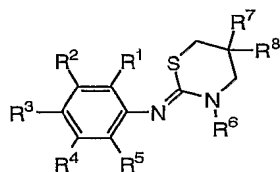


表 1 5



	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-262	NMe <sub>2</sub>	H	OMe	H	H	CSSMe	Me	Me
I-263	NMe <sub>2</sub>	H	H	OMe	H	CSSMe	Me	Me
I-264	Me	NEt <sub>2</sub>	H	H	H	CSSMe	Me	Me
I-265	H	NEt <sub>2</sub>	Me	H	H	CSSMe	Me	Me
I-266	H	NEt <sub>2</sub>	OMe	H	H	CSSMe	Me	Me
I-267	Bu <sup>s</sup>	H	H	H	H	CSSMe	Et	Et
I-268	Pr <sup>i</sup>	H	H	H	H	CSSMe	Pr	Pr
I-269	Pr <sup>i</sup>	H	H	H	H	CSSMe	-(CH <sub>2</sub> ) <sub>4</sub> -	
I-270	Pr <sup>i</sup>	H	H	H	H	CSSMe	-(CH <sub>2</sub> ) <sub>5</sub> -	

表 1 6




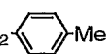
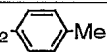
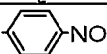
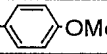
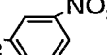
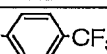
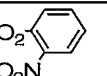
	R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>	R <sup>5</sup>	R <sup>6</sup>	R <sup>7</sup>	R <sup>8</sup>
I-271	Pr <sup>i</sup>	H	H	H	H	SO <sub>2</sub> Me	Me	Me
I-272	Pr <sup>j</sup>	H	H	H	H	SO <sub>2</sub> - 	Me	Me
I-273	Pr <sup>i</sup>	H	H	H	H	SO <sub>2</sub> - 	Me	Me
I-274	H	Pr <sup>i</sup>	H	H	H	SO <sub>2</sub> - 	Me	Me
I-275	H	Pr <sup>i</sup>	H	H	H	SO <sub>2</sub> Et	Me	Me
I-276	H	Pr <sup>i</sup>	H	H	H	SO <sub>2</sub> - 	Me	Me
I-277	H	Pr <sup>i</sup>	H	H	H	SO <sub>2</sub> - 	Me	Me
I-278	H	Pr <sup>i</sup>	H	H	H	SO <sub>2</sub> - 	Me	Me
I-279	H	Pr <sup>i</sup>	H	H	H	SO <sub>2</sub> - 	Me	Me
I-280	H	Pr <sup>i</sup>	H	H	H	SO <sub>2</sub> - 	Me	Me

表 1 7

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-16	57-59°C	1.16 (6H, s), 1.31 (3H, t, J = 7.3), 2.64 (2H, s), 2.91 (2H, q, J = 7.3), 3.78 (2H, s), 6.96 (1H, dd, J = 7.4, 1.2), 7.14 (1H, t, J = 7.4), 7.36 (2H, t, J = 7.4).
I-17		1.15 (6H, s), 1.31 (3H, t, J = 7.3), 2.67 (2H, s), 2.91 (2H, q, J = 7.3), 3.77 (2H, s), 7.10-7.15 (4H, m).
I-18		1.16 (6H, s), 1.31 (3H, t, J = 7.3), 2.68 (2H, s), 2.92 (2H, q, J = 7.3), 3.80 (2H, s), 6.96 (1H, dd, J = 7.7, 1.2), 7.08 (1H, dt, J = 7.7, 1.6), 7.25 (2H, t, J = 7.4), 7.40 (1H, d, J = 7.4).
I-19		1.15 (6H, s), 1.27 (3H, t, J = 7.3), 2.24 (3H, s), 2.62 (2H, s), 2.92 (2H, q, J = 7.4), 3.77 (2H, s), 6.83 (1H, d, J = 7.7), 7.04 (1H, t, J = 7.7), 7.16-7.22 (2H, m).
I-20		1.15 (6H, s), 1.19 (3H, t, J = 7.4), 1.31 (3H, t, J = 7.3), 2.62 (2H, q, J = 7.3), 2.65 (2H, s), 2.94 (2H, q, J = 7.4), 3.77 (2H, s), 6.83 (1H, d, J = 7.6), 7.10-7.22 (3H, m).
I-21		0.95 (3H, t, J = 7.3), 1.15 (6H, s), 1.30 (3H, t, J = 7.4), 1.50-1.64 (2H, m), 2.56 (2H, q, J = 7.3), 2.59 (2H, s), 2.90 (2H, q, J = 7.4), 3.76 (2H, s), 6.82 (1H, d, J = 7.3), 7.06-7.28 (3H, m).
I-22		0.90 (3H, t, J = 7.1), 1.15 (6H, s), 1.29 (3H, t, J = 7.4), 1.30-1.34 (2H, m), 1.52-1.58 (2H, m), 2.54 (2H, q, J = 7.1), 2.62 (2H, s), 2.92 (2H, q, J = 7.4), 3.76 (2H, s), 6.79 (1H, dd, J = 7.9, 1.4), 7.06-7.28 (3H, m).
I-23		0.86 (3H, t, J = 7.4), 1.14 (6H, s), 1.16 (6H, d, J = 6.9), 1.29 (3H, t, J = 7.4), 1.48-1.58 (2H, m), 2.61 (2H, s), 2.89 (2H, q, J = 7.4), 2.88-2.92 (1H, m), 3.76 (2H, d, J = 13.6), 3.82 (1H, d, J = 13.6), 6.82-6.88 (1H, m), 7.10-7.18 (1H, m), 7.23-7.29 (1H, m).
I-24		1.15 (6H, s), 1.27 (3H, t, J = 7.4), 1.33 (9H, s), 2.68 (2H, s), 2.86 (2H, q, J = 7.4), 3.75 (2H, s), 6.86 (1H, dd, J = 7.4, 1.6), 7.08-7.19 (2H, m), 7.38 (2H, dd, J = 7.4, 1.6).
I-25		0.99 (6H, s), 1.25 (3H, t, J = 7.4), 2.45 (2H, s), 2.82 (2H, q, J = 7.4), 3.51 (2H, s), 6.98 (1H, d, J = 7.7), 7.20-7.36 (6H, m), 7.43 (2H, m).
I-26	82-83°C	1.15 (6H, s), 1.29 (3H, t, J = 7.3), 2.66 (2H, s), 2.89 (2H, q, J = 7.4), 3.77 (2H, s), 6.98 (1H, d, J = 7.6), 7.19 (1H, t, J = 7.6), 7.49 (1H, t, J = 7.6), 7.64 (1H, d, J = 7.6).

表 1 8

化合物 番号	物性	
	融点	NMR (CDCl <sub>3</sub> )
I-27		1.16 (6H, s), 1.25 (3H, t, J = 7.4), 2.62 (2H, s), 2.88 (2H, q, J = 7.4), 3.78 (2H, s), 3.83 (3H, s), 6.91-6.96 (3H, m), 7.05-7.14 (1H, m).
I-28		1.15 (6H, s), 1.30 (3H, t, J = 7.4), 1.40 (3H, t, J = 7.0), 2.60 (2H, s), 2.90 (2H, q, J = 7.4), 3.78 (2H, s), 4.08 (2H, q, J = 7.0), 6.90-6.94 (3H, m), 7.06-7.08 (1H, m).
I-29		1.14 (6H, s), 1.29 (6H, d, J = 7.4), 1.31 (6H, d, J = 6.0), 2.59 (2H, s), 2.89 (2H, q, J = 7.4), 3.76 (2H, s), 4.50 (1H, q, J = 6.0), 6.90-6.93 (3H, m), 7.01-7.07 (1H, m).
I-30	78-80°C	1.15 (6H, s), 1.29 (3H, t, J = 7.4), 2.43 (3H, s), 2.63 (2H, s), 2.89 (2H, q, J = 7.4), 3.78 (2H, s), 6.87-6.91 (1H, m), 7.05-7.14 (2H, m), 7.20-7.29 (1H, m).
I-31	55-57°C	1.15 (6H, s), 1.29 (3H, t, J = 7.4), 1.31 (3H, t, J = 7.4), 2.66 (2H, s), 2.89 (2H, q, J = 7.4), 2.94 (2H, q, J = 7.4), 3.78 (2H, s), 6.91 (1H, dd, J = 7.4, 1.6), 7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.4, 1.6).
I-32		1.15 (6H, s), 1.27 (6H, d, J = 6.6), 1.28 (6H, d, J = 7.4), 2.65 (2H, s), 2.88 (2H, q, J = 7.4), 3.38-3.42 (1H, m), 3.78 (2H, s), 6.90 (1H, dd, J = 7.7, 1.6), 7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.7, 1.6).
I-33		1.15 (6H, s), 1.29 (3H, t, J = 7.4), 2.60 (2H, s), 2.71 (6H, s), 2.89 (2H, q, J = 7.4), 3.77 (2H, s), 6.90-6.98 (3H, m), 7.05-7.10 (1H, m).
I-34		1.16 (6H, s), 1.27 (6H, d, J = 6.9), 1.31 (3H, t, J = 7.4), 2.64 (2H, s), 2.91 (2H, q, J = 7.4), 2.98 (1H, q, J = 6.9), 3.77 (2H, s), 6.78-6.83 (2H, m), 7.01-7.04 (1H, m), 7.25-7.27 (1H, m).
I-35	68-69°C	1.16 (6H, s), 1.30 (3H, t, J = 7.3), 2.66 (2H, s), 2.90 (2H, q, J = 7.3), 3.76 (2H, s), 6.98 (2H, dd, J = 6.6, 2.1), 7.31 (2H, dd, J = 6.6, 2.1).
I-36	67-69°C	1.15 (6H, s), 1.20 (6H, d, J = 6.9), 1.26 (3H, t, J = 7.4), 2.64 (2H, s), 2.86 (2H, q, J = 7.4), 2.89 (1H, q, J = 6.9), 3.75 (2H, s), 6.98 (2H, d, J = 8.2), 7.20 (2H, d, J = 8.3).
I-37	125-126°C	1.15 (6H, s), 1.30 (3H, t, J = 7.3), 2.72 (2H, s), 2.92 (2H, q, J = 7.3), 3.78 (2H, s), 7.05 (2H, d, J = 8.3), 7.31 (2H, d, J = 8.3).
I-38	76-78°C	1.15 (6H, s), 1.30 (3H, t, J = 7.4), 2.14 (3H, s), 2.29 (3H, s), 2.63 (2H, s), 2.89 (2H, q, J = 7.4), 3.77 (2H, s), 6.70 (1H, d, J = 7.9), 6.94 (1H, d, J = 7.9), 7.06 (1H, s).

表 1 9

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-39		1.14 (6H, s), 1.29 (3H, t, J = 7.4), 2.21 (3H, s), 2.32 (3H, s), 2.65 (2H, s), 2.89 (2H, q, J = 7.4), 3.76 (2H, s), 6.73 (1H, d, J = 7.9), 6.97 (1H, d, J = 7.9), 7.02 (1H, s).
I-40		1.15 (6H, s), 1.30 (3H, t, J = 7.4), 2.19 (3H, s), 2.31 (3H, s), 2.64 (2H, s), 2.89 (2H, q, J = 7.4), 3.77 (2H, s), 6.65 (1H, s), 6.86 (1H, d, J = 7.9), 7.07 (1H, d, J = 7.7).
I-41	59-61°C	1.15 (6H, s), 1.30 (3H, t, J = 7.3), 2.19 (6H, s), 2.62 (2H, s), 2.90 (2H, q, J = 7.3), 3.78 (2H, s), 6.90-6.96 (1H, m), 7.02-7.08 (2H, m).
I-42		1.15 (6H, s), 1.31 (3H, t, J = 7.4), 2.26 (3H, s), 2.28 (3H, s), 2.65 (2H, s), 2.91 (2H, q, J = 7.4), 3.78 (2H, s), 6.74 (1H, dd, J = 7.9, 1.8), 6.80 (1H, d, J = 1.8), 7.13 (1H, d, J = 7.7).
I-43		1.15 (6H, s), 1.31 (3H, t, J = 7.4), 2.31 (6H, s), 2.63 (2H, s), 2.90 (2H, q, J = 7.4), 3.76 (2H, s), 6.58 (2H, s), 6.77 (1H, s).
I-44		1.15 (6H, s), 1.28 (3H, t, J = 7.4), 2.21 (3H, s), 2.64 (2H, s), 2.90 (2H, q, J = 7.4), 3.76 (2H, s), 6.74 (1H, d, J = 8.2), 7.10-7.18 (2H, m).
I-45		1.15 (6H, s), 1.28 (3H, t, J = 7.4), 2.31 (3H, s), 2.66 (2H, s), 2.92 (2H, q, J = 7.4), 3.78 (2H, s), 6.74 (1H, d, J = 7.8), 7.04 (1H, d, J = 7.8), 7.25 (1H, d, J = 7.8).
I-46	119-120°C	1.16 (6H, s), 1.25 (6H, d, J = 6.9), 1.29 (3H, t, J = 7.4), 2.69 (2H, s), 2.90 (2H, q, J = 7.4), 3.15 (1H, m), 3.79 (2H, s), 6.92 (1H, d, J = 8.7), 8.01 (1H, dd, J = 8.5, 2.4), 8.18 (1H, d, J = 2.4).
I-47		1.17 (6H, s), 1.23 (6H, d, J = 6.9), 1.30 (3H, t, J = 7.4), 2.69 (2H, s), 2.91 (2H, q, J = 7.4), 3.19 (1H, m), 3.79 (2H, s), 7.41 (1H, d, J = 8.7), 7.71 (1H, d, J = 2.4), 7.92 (1H, dd, J = 8.7, 2.4).
I-48		1.15 (6H, s), 1.30 (3H, t, J = 7.4), 2.73 (2H, s), 2.93 (2H, q, J = 7.4), 3.82 (2H, s), 7.15 (2H, d, J = 8.3), 8.48 (1H, dd, J = 8.3, 1.4), 8.90 (1H, d, J = 8.3).
I-49	64-66°C	0.95 (3H, t, J = 7.3), 1.15 (6H, s), 1.50-1.64 (2H, m), 2.32 (3H, s), 2.56 (2H, q, J = 7.3), 2.63 (2H, s), 3.78 (2H, s), 6.82 (1H, d, J = 7.3), 7.06-7.28 (3H, m).
I-50	95-96°C	1.16 (6H, s), 1.20 (6H, d, J = 6.9), 2.32 (3H, s), 2.64 (2H, s), 3.12 (1H, q, J = 6.9), 3.79 (2H, s), 6.78-6.82 (1H, m), 7.11-7.20 (2H, m), 7.30-7.34 (1H, m).

表 2 0

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-51	53-56°C	0.85 (3H, t, J = 7.3), 1.15 (6H, d, J = 6.9), 1.18 (6H, s), 1.57-1.70 (2H, m), 2.31 (3H, s), 2.62 (2H, s), 2.91 (1H, q, J = 6.9), 3.74 (1H, d, J = 13.7), 3.78 (1H, d, J = 13.7), 6.78-6.83 (1H, m), 7.11-7.18 (2H, m), 7.23-7.30 (1H, m).
I-52	88-90°C	1.17 (6H, s), 1.27 (6H, d, J = 6.9), 2.33 (3H, s), 2.65 (2H, s), 2.91 (1H, q, J = 6.9), 3.79 (2H, s), 6.78-6.83 (2H, m), 7.01-7.04 (1H, m), 7.20-7.24 (1H, m).
I-53		1.16 (6H, s), 2.32 (3H, s), 2.65 (2H, s), 3.77 (2H, s), 3.87 (6H, s), 6.51-6.59 (2H, m), 6.80-6.89 (1H, m).
I-54	102-104°C	1.15 (6H, s), 2.31 (3H, s), 2.65 (2H, s), 3.76 (2H, s), 5.96 (2H, s), 6.42 (1H, dd, J = 8.1, 1.8), 6.53 (1H, d, J = 1.8), 6.78 (1H, d, J = 8.1).
I-55	129-131°C	1.16 (6H, s), 2.32 (3H, s), 2.67 (2H, s), 3.78 (2H, s), 3.85 (6H, s), 3.86 (3H, s), 6.20 (2H, s)
I-56	107-109°C	1.17 (3H, t, J = 7.6), 1.22 (6H, s), 2.58 (2H, q, J = 7.6), 2.64 (3H, s), 2.66 (2H, s), 4.51 (2H, s), 6.91 (1H, dd, J = 7.5, 1.3), 7.02-7.19 (2H, m), 7.23-7.28 (1H, m).
I-57		0.85 (3H, t, J = 7.3), 1.18 (6H, d, J = 6.9), 1.23 (6H, s), 1.57-1.70 (2H, m), 2.64 (3H, s), 2.66 (2H, s), 2.88 (1H, q, J = 6.9), 4.38 (1H, d, J = 13.7), 4.60 (1H, d, J = 13.7), 6.83-6.90 (1H, m), 7.11-7.18 (2H, m), 7.28-7.35 (1H, m).
I-58	85-87°C	1.22 (6H, s), 2.62 (3H, s), 2.63 (2H, s), 3.35 (3H, s), 4.40 (2H, s), 4.48 (2H, s), 6.93-6.99 (1H, m), 7.11-7.29 (2H, m), 7.40-7.49 (1H, m).
I-59	113-114°C	1.22 (3H, s), 1.24 (3H, s), 1.37 (3H, d, J = 6.4), 2.63 (3H, s), 2.65 (2H, s), 3.24 (3H, s), 4.35 (1H, d, J = 13.6), 4.55 (1H, q, J = 6.4), 4.66 (1H, d, J = 13.6), 6.91 (1H, d, J = 7.4), 7.19-7.40 (2H, m), 7.51 (1H, d, J = 7.4).
I-60	128-130°C	1.22 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 3.85 (3H, s), 4.53 (2H, s), 6.93-6.99 (2H, m), 7.02-7.15 (2H, m).
I-61	100-101°C	1.26 (6H, s), 1.43 (3H, t, J = 7.4), 2.66 (2H, s), 2.67 (3H, s), 4.08 (2H, q, J = 7.0), 4.55 (2H, s), 6.95-6.99 (3H, m), 7.11-7.18 (1H, m).
I-62	137-139°C	1.23 (6H, s), 2.43 (3H, s), 2.64 (3H, s), 2.67 (2H, s), 4.53 (2H, s), 6.87-6.92 (1H, m), 7.11-7.20 (2H, m), 7.23-7.29 (1H, m).

表 2 1

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-63	103- 105°C	1.15 (6H, s), 1.29 (3H, t, J = 7.4), 1.31 (3H, t, J = 7.4), 2.66 (2H, s), 2.89 (2H, q, J = 7.4), 2.94 (2H, q, J = 7.4), 3.78 (2H, s), 6.91 (1H, dd, J = 7.4, 1.6), 7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.4, 1.6).
I-64	125- 126°C	1.24 (6H, s), 1.28 (6H, d, J = 6.6), 2.63 (3H, s), 2.66 (2H, s), 3.38-3.42 (1H, m), 4.53 (2H, s), 6.97 (1H, dd, J = 7.7, 1.6), 7.08-7.20 (2H, m), 7.32 (1H, dd, J = 7.7, 1.6).
I-65		1.22 (6H, s), 2.63 (3H, s), 2.65 (2H, d, J = 13.6), 2.75 (3H, s), 4.17 (1H, d, J = 13.6), 4.77 (1H, d, J = 13.6), 7.06 (1H, dd, J = 7.7, 1.7), 7.19-7.40 (2H, m), 7.97 (1H, dd, J = 7.7, 1.7).
I-66	147- 149°C	1.23 (6H, s), 2.63 (3H, s), 2.71 (2H, s), 3.13 (3H, s), 4.52 (2H, s), 7.11 (1H, m), 7.11-7.20 (2H, m), 7.23-7.29 (1H, m).
I-67	129- 130°C	1.22 (6H, s), 1.23 (3H, t, J = 6.9), 2.63 (3H, s), 2.66 (2H, s), 2.70-2.85 (1H, m), 2.90-3.15 (1H, m), 4.25 (1H, d, J = 13.6), 4.70 (1H, d, J = 13.6), 7.06 (1H, d, J = 7.5), 7.30-7.45 (2H, m), 7.90 (1H, d, J = 7.5).
I-68	100- 102°C	1.23 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 2.71 (6H, s), 4.50 (2H, s), 6.93-6.99 (3H, m), 7.02-7.15 (1H, m).
I-69		1.23 (6H, s), 1.25 (6H, d, J = 6.9), 2.64 (3H, s), 2.66 (2H, s), 2.92 (1H, q, J = 6.9), 4.52 (2H, s), 6.84-6.86 (2H, m), 7.08-7.13 (1H, m), 7.28-7.32 (1H, m).
I-70	116- 118°C	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.97 (2H, d, J = 8.6), 7.35 (2H, d, J = 8.6).
I-71	103- 105°C	1.22 (6H, s), 2.19 (3H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 6.79 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9), 7.02 (1H, s).
I-72	100- 101°C	1.23 (6H, s), 2.18 (3H, s), 2.32 (3H, s), 2.64 (3H, s), 2.65 (2H, s), 4.51 (2H, s), 6.71 (1H, s), 6.88 (1H, d, J = 7.9), 7.08 (1H, t, J = 7.9).
I-73	93-95°C	1.22 (6H, s), 2.12 (3H, s), 2.30 (3H, s), 2.64 (3H, s), 2.65 (2H, s), 4.51 (2H, s), 6.76 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9), 7.08 (1H, t, J = 7.9).
I-74	126- 128°C	1.23 (6H, s), 2.25 (3H, s), 2.27 (3H, s), 2.64 (3H, s), 2.65 (2H, s), 4.51 (2H, s), 6.76 (1H, d, J = 7.9), 6.82 (1H, s), 7.13 (1H, d, J = 7.9).
I-75	96-98°C	1.23 (6H, s), 2.32 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 4.51 (2H, s), 6.64 (2H, s), 6.80 (1H, s).
I-76		1.22 (6H, s), 2.64 (3H, s), 2.65 (2H, s), 3.79 (3H, s), 3.88 (3H, s), 4.52 (2H, s), 6.60 (1H, d, J = 7.9), 6.73 (1H, d, J = 7.9), 7.04 (1H, d, J = 7.9).

表 2 2

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-77		1.24 (6H, s), 2.63 (3H, s), 2.68 (2H, s), 3.87 (6H, s), 4.50 (2H, s), 6.61-6.65 (2H, m), 6.85-6.89 (1H, m).
I-78		1.22 (6H, s), 2.62 (3H, s), 2.66 (2H, s), 3.81 (6H, s), 4.52 (2H, s), 6.48 (1H, dd, J=8.5, 2.4), 6.51 (1H, d, J=2.4), 6.92 (1H, d, J=8.5).
I-79		1.22 (6H, s), 2.62 (3H, s), 2.64 (2H, s), 3.77 (6H, s), 4.52 (2H, s), 6.56 (1H, d, J=2.4), 6.68 (1H, dd, J=8.5, 2.4), 6.86 (1H, d, J=8.5).
I-80	108-110°C	1.23 (6H, s), 2.63 (3H, s), 2.66 (2H, s), 4.49 (2H, s), 6.04 (2H, s), 6.50 (1H, dd, J=8.1, 1.8), 6.61 (1H, d, J=1.8), 6.83 (1H, d, J=8.1).
I-81		1.23 (6H, s), 1.25 (6H, d, J=6.9), 2.65 (3H, s), 2.71 (2H, s), 3.11 (1H, q, J=6.9), 4.51 (2H, s), 7.02 (1H, d, J=8.5), 8.04 (1H, dd, J=8.5, 2.7), 8.21 (1H, d, J=2.7).
I-82		1.21 (6H, s), 1.24 (6H, d, J=6.9), 2.63 (3H, s), 2.66 (2H, s), 3.17 (1H, q, J=6.9), 4.51 (2H, s), 7.45 (1H, d, J=8.5), 7.80 (1H, d, J=2.4), 7.99 (1H, dd, J=8.5, 2.4).
I-83		1.24 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 3.85 (6H, s), 3.86 (3H, s), 4.51 (2H, s), 6.28 (2H, s).
I-84	68-70	1.22 (6H, d, J=6.9), 1.23 (6H, s), 1.35 (3H, t, J=7.4), 2.65 (2H, s), 3.11 (1H, q, J=6.9), 3.25 (2H, q, J=6.9), 4.48 (2H, s), 6.89-6.92 (1H, m), 7.14-7.20 (2H, m), 7.30-7.34 (1H, m).
I-85		0.85 (3H, t, J=7.4), 1.18 (6H, d, J=6.9), 1.23 (6H, s), 1.35 (3H, t, J=7.4), 1.57-1.70 (2H, m), 2.56 (2H, s), 2.87 (1H, q, J=6.9), 3.25 (2H, q, J=7.4), 4.35 (1H, d, J=13.7), 4.60 (1H, d, J=13.7), 6.89-6.92 (1H, m), 7.10-7.18 (2H, m), 7.30-7.34 (1H, m).
I-86	96-97	1.23 (6H, s), 1.36 (3H, t, J=7.0), 1.40 (3H, t, J=7.0), 2.63 (2H, s), 3.27 (2H, q, J=7.4), 4.06 (2H, q, J=7.0), 4.51 (2H, s), 6.92-7.08 (3H, m), 7.11-7.15 (1H, m).
I-87	105-106	1.22 (6H, s), 1.35 (3H, t, J=7.4), 2.43 (3H, s), 2.66 (2H, s), 3.26 (2H, q, J=7.4), 4.50 (2H, s), 6.95-6.98 (1H, m), 7.10-7.17 (2H, m), 7.24-7.29 (1H, m).



表 2 3

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-88		1.23 (6H, s), 1.25 (6H, d, J = 6.9), 1.35 (3H, t, J = 7.4), 2.66 (2H, s), 2.90 (1H, q, J = 6.9), 3.28 (2H, q, J = 7.4), 4.50 (2H, s), 6.84-6.88 (2H, m), 7.08-7.13 (1H, m), 7.28-7.32 (1H, m).
I-89		0.98 (3H, t, J = 7.4), 1.12 (6H, s), 1.22 (6H, d, J = 6.9), 1.72-1.80 (2H, m), 2.58 (2H, s), 2.90 (2H, t, J = 7.4), 3.06 (1H, q, J = 6.9), 3.71 (2H, s), 6.71-6.76 (1H, m), 7.11-7.20 (2H, m), 7.30-7.34 (1H, m).
I-90	99-101°C	1.14 (6H, s), 1.21 (6H, d, J = 6.9), 2.58 (2H, s), 3.14 (1H, q, J = 6.9), 3.64 (2H, s), 3.86 (3H, s), 6.73-6.78 (1H, m), 7.11-7.18 (2H, m), 7.28-7.35 (1H, m).
I-91		1.00 (3H, t, J = 7.3), 1.14 (6H, s), 1.20 (6H, d, J = 6.9), 1.74 (2H, q, J = 7.3), 2.58 (2H, s), 3.16 (1H, q, J = 6.9), 3.65 (2H, s), 4.23 (2H, q, J = 6.9), 6.73-6.80 (1H, m), 7.12-7.18 (2H, m), 7.31-7.34 (1H, m).
I-92	52-53°C	1.13 (6H, s), 1.19 (6H, d, J = 6.9), 1.20 (3H, t, J = 7.4), 2.60 (2H, s), 2.98 (1H, q, J = 6.9), 3.38 (2H, q, J = 7.4), 3.77 (2H, s), 6.73-6.78 (1H, m), 7.09-7.18 (2H, m), 7.28-7.32 (1H, m).
I-93	76-78°C	1.14 (6H, s), 1.22 (6H, d, J = 6.9), 2.62 (2H, s), 2.96 (1H, q, J = 6.9), 3.48 (3H, s), 3.75 (2H, s), 4.64 (2H, s), 6.73-6.78 (1H, m), 7.10-7.17 (2H, m), 7.25-7.32 (1H, m).
I-94	61-62°C	1.14 (6H, s), 1.20 (6H, d, J = 6.9), 2.23 (3H, s), 2.68 (2H, s), 2.93 (1H, q, J = 6.9), 3.71 (2H, s), 3.94 (2H, s), 6.82-6.86 (1H, m), 7.10-7.18 (2H, m), 7.30-7.36 (1H, m).
I-95	50-52°C	1.13 (6H, s), 1.20 (6H, d, J = 6.9), 1.31 (3H, t, J = 7.3), 2.65 (2H, s), 2.68 (2H, s), 2.90 (1H, q, J = 6.9), 3.71 (2H, s), 3.97 (2H, s), 6.82-6.86 (1H, m), 7.12-7.19 (2H, m), 7.30-7.36 (1H, m).
I-96	73-75°C	1.21 (6H, s), 1.22 (6H, d, J = 6.9), 1.42 (3H, t, J = 6.9), 2.61 (2H, s), 3.10 (1H, q, J = 6.9), 4.15 (2H, s), 4.65 (2H, q, J = 6.9), 6.74-6.78 (1H, m), 7.14-7.20 (2H, m), 7.30-7.34 (1H, m).
I-97	160-162°C	1.18 (6H, s), 1.22 (6H, d, J = 6.9), 1.25 (3H, t, J = 7.4), 2.60 (2H, s), 2.90 (1H, q, J = 6.9), 3.71 (2H, q, J = 7.4), 4.40 (2H, s), 6.74-6.78 (1H, m), 7.14-7.20 (2H, m), 7.30-7.34 (1H, m).
I-98		1.04 (3H, t, J = 7.4), 1.20 (6H, d, J = 6.9), 1.27 (6H, s), 1.73 (2H, m), 2.64 (2H, s), 3.12 (1H, q, J = 6.9), 3.22 (2H, t, J = 7.4), 4.48 (2H, s), 6.89-6.92 (1H, m), 7.10-7.20 (2H, m), 7.28-7.35 (1H, m).

表 2 4

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-99	113- 114	1.04 (6H, d, J = 6.9), 1.27 (6H, s), 1.42 (3H, d, J = 6.9), 2.63 (2H, s), 3.14 (1H, q, J = 6.9), 4.02 (1H, q, J = 6.9), 4.46 (2H, s), 6.89-6.93 (1H, m), 7.10-7.20 (2H, m), 7.28-7.35 (1H, m).
I-100		1.10 (6H, d, J = 6.9), 1.22 (6H, s), 2.64 (2H, s), 3.08 (1H, q, J = 6.9), 4.48 (2H, s), 4.49 (2H, s), 6.83-6.90 (1H, m), 7.11-7.18 (2H, m), 7.20-7.38 (6H, m).
I-101		1.15 (6H, s), 1.25 (3H, t, J = 7.4), 2.70 (2H, s), 2.87 (2H, q, J = 7.4), 3.69 (2H, s), 4.55 (2H, s), 7.30-7.40 (4H, m).
I-102		1.24 (6H, s), 2.57 (3H, s), 2.73 (2H, s), 4.43 (2H, s), 4.58 (2H, s), 7.23-7.40 (4H, m).
I-103		1.11 (6H, s), 1.26 (3H, t, J = 7.4), 2.61 (2H, s), 2.83 (2H, q, J = 7.4), 3.10 (2H, t, J = 7.4), 3.65 (2H, s), 3.66 (2H, t, J = 7.4), 7.17 (1H, dd, J = 8.2, 2.1), 7.30 (1H, t, J = 8.2), 7.36 (1H, d, J = 2.1).
I-104		1.16 (6H, s), 2.55 (3H, s), 2.63 (2H, s), 3.13 (2H, t, J = 7.5), 3.69 (2H, t, J = 7.5), 4.35 (2H, s), 7.15 (1H, dd, J = 8.2, 2.1), 7.25 (1H, t, J = 8.2), 7.36 (1H, d, J = 2.1).
I-105		1.20 (6H, d, J = 6.9), 1.30 (3H, t, J = 7.4), 2.10-2.22 (2H, m), 2.88 (2H, t, J = 6.4), 2.94 (2H, q, J = 7.4), 3.11 (1H, q, J = 6.9), 4.05 (2H, t, J = 7.4), 6.82-6.86 (1H, m), 7.10-7.16 (2H, m), 7.28-7.34 (1H, m).
I-106		1.17-1.30 (12H, m), 1.45-1.52 (1H, m), 1.90-1.96 (1H, m), 2.92 (2H, q, J = 7.4), 2.95-3.05 (2H, m), 3.14-3.23 (1H, m), 3.72-3.75 (1H, m), 7.20-7.30 (2H, m), 7.40-7.45 (2H, m).
I-107		1.22 (6H, d, J = 6.9), 1.28 (3H, d, J = 6.6), 1.29 (3H, t, J = 7.4), 1.75-1.77 (1H, m), 2.29-2.34 (1H, m), 2.88 (2H, q, J = 7.4), 3.14 (1H, m), 3.31-3.36 (1H, m), 4.01-4.10 (2H, m), 6.81-6.85 (1H, m), 7.10-7.20 (2H, m), 7.28-7.35 (1H, m).
I-108		1.12 (3H, d, J = 6.6), 1.20 (6H, d, J = 6.9), 1.29 (3H, t, J = 7.4), 2.40-2.50 (1H, m), 2.57 (1H, dd, J = 13.5, 6.6), 2.91 (2H, q, J = 7.4), 2.95 (1H, m), 3.14 (1H, m), 3.45 (1H, dd, J = 13.5, 8.4), 4.30 (1H, dd, J = 13.5, 8.4), 6.81-6.85 (1H, m), 7.10-7.20 (2H, m), 7.28-7.35 (1H, m).

表 2 5

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-109		0.88 (6H, t, J = 7.5), 1.22 (6H, d, J = 6.9), 1.29 (3H, t, J = 7.4), 1.45-1.52 (4H, m), 2.58 (2H, s), 2.89 (2H, q, J = 7.4), 3.15 (1H, m), 3.77 (2H, s), 6.78-6.83 (1H, m), 7.08-7.21 (2H, m), 7.30-7.35 (1H, m).
I-110	109-111°C	1.21 (6H, d, J = 6.9), 1.23 (6H, s), 1.25 (3H, t, J = 7.4), 2.81 (2H, q, J = 7.4), 2.90 (1H, t, J = 6.9), 3.05 (2H, s), 7.13-7.30 (2H, m), 7.36-7.45 (2H, m).
I-111		1.21 (6H, d, J = 6.9), 1.31 (3H, t, J = 7.4), 1.42 (3H, d, J = 6.7), 2.90 (2H, q, J = 7.4), 3.23 (1H, q, J = 6.9), 3.69 (1H, q, J = 6.6), 3.87-3.93 (1H, m), 6.78-6.82 (1H, m), 7.08-7.20 (2H, m), 7.25-7.30 (1H, m).
I-112		1.19-1.25 (9H, m), 1.14 (3H, d, J = 6.3), 2.76 (1H, d, J = 10.9), 2.96 (2H, t, J = 7.4), 3.22 (1H, q, J = 6.9), 3.44-3.48 (1H, m), 5.12 (1H, q, J = 6.3), 6.81-6.85 (1H, m), 7.09-7.16 (2H, m), 7.28-7.32 (1H, m).
I-113	126-128°C	1.18 (6H, d, J = 6.9), 1.22 (6H, d, J = 6.9), 1.45 (3H, t, J = 7.4), 1.80-1.91 (1H, m), 2.57-2.64 (2H, m), 2.61 (3H, s), 2.86-2.89 (1H, m), 3.07 (1H, m), 5.95-6.05 (1H, m), 6.98-7.00 (1H, m), 7.12-7.22 (2H, m), 7.28-7.35 (1H, m).
I-114		1.20 (6H, d, J = 6.9), 1.28 (3H, d, J = 6.9), 1.82-1.88 (1H, m), 2.48-2.63 (1H, m), 2.63 (3H, s), 3.11 (1H, m), 3.29-3.35 (1H, m), 4.26 (1H, m), 4.98 (1H, m), 6.90-6.95 (1H, m), 7.15-7.20 (2H, m), 7.30-7.35 (1H, m).
I-115		1.14 (3H, d, J = 6.5), 1.20 (6H, d, J = 6.9), 2.53 (1H, dd, J = 13.0, 5.4), 2.75 (3H, s), 2.80-2.85 (1H, m), 2.95 (1H, dd, J = 13.0, 5.4), 3.11 (1H, m), 3.72 (1H, dd, J = 13.0, 9.0), 5.15 (1H, dd, J = 13.0, 9.0), 6.90-6.95 (1H, m), 7.15-7.25 (2H, m), 7.30-7.35 (1H, m).
I-116	119-121°C	0.88 (6H, t, J = 7.5), 1.20 (6H, d, J = 6.9), 1.45-1.52 (4H, m), 2.62 (2H, s), 2.64 (3H, s), 3.15 (1H, m), 4.66 (2H, s), 6.78-6.83 (1H, m), 7.08-7.21 (2H, m), 7.30-7.35 (1H, m).
I-117	99-100°C	0.71-0.79 (1H, m), 0.85-0.90 (2H, m), 1.22 (6H, d, J = 6.9), 1.22-1.25 (1H, m), 2.61 (3H, s), 2.79 (3H, s), 3.00-3.05 (1H, m), 4.40 (2H, s), 6.92-6.95 (1H, m), 7.15-7.21 (2H, m), 7.30-7.35 (1H, m).

表 2 6

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-118		1.23 (6H, s), 1.45 (6H, t, J = 7.4), 2.63 (3H, s), 2.67(2H,s), 4.08 (2H, q, J = 7.0), 4.55 (2H, s), 6.57-6.63 (2H, m), 6.85 (1H, d, J = 7.9).
I-119	116- 118°C	1.24 (6H, s), 2.37 (3H, s), 2.64 (3H, s), 2.66 (2H, s), 3.84 (3H, s), 4.54 (2H, s), 6.75-6.80 (2H, m), 6.88 (1H, m).
I-120	92-93°C	1.23 (6H, s), 2.27 (3H, s), 2.63 (3H, s), 2.67 (2H, s), 3.84 (3H, s), 4.51 (2H, s), 6.51-6.58 (2H, m), 7.10 (1H, d, J = 7.9).
I-121	129- 130°C	1.22 (6H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 3.80 (3H, s), 4.53 (2H, s), 6.78-6.95 (3H, m).
I-122	93-95°C	1.22 (6H, s), 2.12 (3H, s), 2.30 (3H, s), 2.64 (3H, s), 2.65 (2H, s), 4.51 (2H, s), 6.76 (1H, d, J = 7.9), 6.98 (1H, d, J = 7.9), 7.08 (1H, t, J = 7.9).
I-123	151- 152°C	1.22 (6H, s), 1.83 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 3.17 (3H, s), 4.40 (1H, d, J = 13.6), 4.65 (1H, d, J = 13.6), 7.01 (1H, d, J = 7.9), 7.10-7.15 (2H, m), 7.30-7.35 (1H, m).

表 2 7

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-124	105-106°C	1.23 (6H, s), 1.41 (3H, t, J=7.0), 2.63 (3H, s), 2.66 (2H, s), 4.08 (2H, q, J=7.0), 4.50 (2H, s), 6.88 (2H, d, J=8.6), 6.98 (2H, d, J=8.6).
I-125	92-94°C	1.23 (6H, s), 1.40 (3H, t, J=7.0), 2.62 (3H, s), 2.66 (2H, s), 4.08 (2H, q, J=7.0), 4.50 (2H, s), 6.57-6.63 (2H, m), 6.70-6.75 (1H, m), 7.25-7.30 (1H, m).
I-126	108-109°C	1.23 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 3.81 (3H, s), 4.50 (2H, s), 6.92 (2H, d, J=8.6), 7.04 (2H, d, J=8.6).
I-127	62-64°C	1.23 (6H, s), 2.63 (3H, s), 2.66 (2H, s), 3.82 (3H, s), 4.50 (2H, s), 6.57-6.63 (2H, m), 6.70-6.75 (1H, m), 7.25-7.30 (1H, m).
I-128	78-79°C	1.23 (6H, s), 1.44 (3H, t, J=7.0), 2.59 (3H, s), 2.63 (2H, s), 3.82 (3H, s), 4.10 (2H, q, J=7.0), 4.47 (2H, s), 6.57-6.63 (2H, m), 6.82-6.87 (1H, m).
I-129	58-60°C	1.04 (3H, t, J=7.0), 1.23 (6H, s), 2.00 (2H, sext, J=7.0), 2.63 (3H, s), 2.67 (2H, s), 3.87 (3H, s), 4.10 (2H, t, J=7.0), 4.50 (2H, s), 6.58-6.64 (2H, m), 6.86-6.91 (1H, m).
I-130		1.13 (6H, s), 1.45 (6H, t, J=7.4), 2.28 (3H, s), 2.62 (2H, s), 3.74 (2H, s), 4.08 (4H, q, J=7.4), 6.46-6.53 (2H, m), 6.88-6.92 (1H, m).
I-131	91-93°C	1.04 (3H, t, J=7.0), 1.22 (6H, s), 1.76 (2H, sext, J=7.0), 2.63 (3H, s), 2.65 (2H, s), 3.91 (2H, t, J=7.0), 4.50 (2H, s), 6.90 (2H, d, J=8.6), 6.98 (2H, d, J=8.6).
I-132	103-104°C	1.04 (3H, t, J=7.0), 1.22 (6H, s), 1.76 (2H, sext, J=7.0), 2.63 (3H, s), 2.65 (2H, s), 3.91 (2H, t, J=7.0), 4.50 (2H, s), 6.50 (1H, d, J=2.1), 6.60 (1H, d, J=7.4), 6.72 (1H, dd, J=7.4, 2.1), 7.28 (1H, d, J=7.4).
I-133	91-92°C	0.98 (3H, t, J=7.0), 1.23 (6H, s), 1.42-1.48 (2H, m), 1.70-1.80 (2H, m), 2.63 (3H, s), 2.65 (2H, s), 3.96 (2H, t, J=7.0), 4.50 (2H, s), 6.90 (2H, d, J=8.6), 6.98 (2H, d, J=8.6).
I-134	86-87°C	0.98 (3H, t, J=7.0), 1.23 (6H, s), 1.42-1.48 (2H, m), 1.70-1.80 (2H, m), 2.63 (3H, s), 2.65 (2H, s), 3.96 (2H, t, J=7.0), 4.50 (2H, s), 6.50 (1H, d, J=2.1), 6.60 (1H, d, J=7.8), 6.72 (1H, dd, J=7.8, 2.1), 7.28 (1H, d, J=7.8).

表 2 8

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-135	69-70°C	1.22 (6H, s), 1.47 (3H, t, J=7.0), 2.64 (3H, s), 2.66 (2H, s), 3.88 (3H, s), 4.15 (2H, q, J=7.0), 4.51 (2H, s), 6.61 (1H, d, J=8.2), 6.62 (1H, d, J=2.1), 6.88 (1H, d, J=8.2).
I-136	88-89°C	1.04 (3H, t, J=7.0), 1.23 (6H, s), 1.80 (2H, sext, J=7.0), 2.63 (3H, s), 2.67 (2H, s), 3.87 (3H, s), 3.90 (2H, t, J=7.0), 4.51 (2H, s), 6.61 (1H, dd, J=8.2, 2.1), 6.62 (1H, d, J=2.1), 6.88 (1H, d, J=8.2).
I-137	83-85°C	0.98 (3H, t, J=7.0), 1.23 (6H, s), 1.42-1.48 (2H, m), 1.70-1.80 (2H, m), 2.64 (3H, s), 2.68 (2H, s), 3.87 (3H, s), 4.03 (2H, t, J=7.0), 4.50 (2H, s), 6.59 (1H, d, J=8.2), 6.61 (1H, s), 6.88 (1H, d, J=8.2).
I-138	84-85°C	1.23 (6H, s), 1.34 (6H, d, J=6.1), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 4.53 (1H, sept, J=6.1), 6.89 (2H, d, J=8.6), 7.04 (2H, d, J=8.6).
I-139	92-93°C	1.23 (6H, s), 1.34 (6H, d, J=6.1), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 4.53 (1H, sept, J=6.1), 6.50 (1H, d, J=2.1), 6.60 (1H, d, J=8.0), 6.72 (1H, dd, J=8.0, 2.1), 7.28 (1H, d, J=8.0).
I-140	109-110°C	1.22 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 7.04 (2H, d, J=7.5), 7.15 (1H, d, J=7.5), 7.32 (2H, t, J=7.5).
I-141	92-93°C	1.23 (6H, s), 2.63 (3H, s), 2.69 (2H, s), 4.54 (2H, s), 7.01-7.08 (1H, m), 7.11-7.15 (3H, m).
I-142	133-135°C	1.23 (6H, s), 2.63 (3H, s), 2.69 (2H, s), 4.54 (2H, s), 7.03 (1H, dd, J=8.0, 2.1), 7.08 (1H, dd, J=8.0, 2.1), 7.25 (1H, t, J=8.0), 7.44 (1H, t, J=8.0).
I-143	92-93°C	1.23 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 4.50 (2H, s), 6.88 (1H, dd, J=8.0, 2.1), 7.03 (1H, d, J=2.1), 7.15 (1H, dd, J=8.0, 2.1), 7.28 (1H, t, J=8.0).
I-144	134-135°C	1.22 (6H, s), 2.22 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 7.00 (1H, d, J=8.1), 7.08 (1H, t, J=8.1), 7.15-7.25 (2H, m).
I-145	87-89°C	1.23 (6H, s), 2.37 (3H, s), 2.63 (3H, s), 2.66 (2H, s), 4.50 (2H, s), 6.82 (1H, d, J=8.1), 6.84 (1H, s), 6.98 (1H, d, J=8.1), 7.21 (1H, t, J=8.1).

表 2 9

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-146	91-93°C	1.23 (6H, s), 2.35 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 4.50 (2H, s), 6.92 (2H, d, J=8.6), 7.15 (2H, d, J=8.6).
I-147	82-83°C	0.90 (3H, t, J=7.0), 1.22 (6H, s), 1.28-1.40 (2H, m), 1.48-1.55 (2H, m), 2.55 (2H, t, J=7.0), 2.64 (3H, s), 2.66 (2H, s), 4.50 (2H, s), 6.90 (1H, d, J=7.8), 7.09 (1H, t, J=7.8), 7.11 (1H, t, J=7.8), 7.28 (1H, d, J=7.8).
I-148	72-73°C	0.90 (3H, t, J=7.0), 1.22 (6H, s), 1.28-1.40 (2H, m), 1.48-1.55 (2H, m), 2.60 (2H, t, J=7.0), 2.64 (3H, s), 2.66 (2H, s), 4.50 (2H, s), 6.95 (2H, d, J=8.6), 7.18 (2H, d, J=8.6).
I-149	133-134°C	1.23 (6H, s), 1.35 (9H, s), 2.65 (3H, s), 2.69 (2H, s), 4.50 (2H, s), 6.97 (1H, d, J=7.8), 7.13 (1H, t, J=7.8), 7.19 (1H, t, J=7.8), 7.41 (1H, d, J=7.8).
I-150	99-100°C	1.22 (6H, s), 1.23 (3H, t, J=7.4), 2.62 (3H, s), 2.64 (2H, s), 2.66 (2H, q, J=7.4), 4.50 (2H, s), 6.95 (2H, d, J=8.6), 7.20 (2H, d, J=8.6).
I-151	40-42°C	1.23 (6H, s), 1.24 (3H, t, J=7.0), 2.64 (3H, s), 2.66 (2H, s), 2.67 (2H, q, J=7.0), 4.52 (2H, s), 6.83 (1H, d, J=8.1), 6.86 (1H, s), 7.00 (1H, d, J=8.1), 7.28 (1H, t, J=8.1).
I-152	118-119°C	1.23 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 4.52 (2H, s), 6.97-7.10 (4H, m).
I-153	89-90°C	1.23 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 4.52 (2H, s), 6.73-6.90 (3H, m), 7.25-7.30 (1H, m).
I-154	111-112°C	1.22 (6H, s), 1.25 (6H, d, J=7.0), 2.62 (3H, s), 2.64 (2H, s), 2.91 (1H, sept, J=7.0), 4.50 (2H, s), 6.95 (2H, d, J=8.6), 7.25 (2H, d, J=8.6).
I-155	127-129°C	1.23 (6H, s), 2.62 (3H, s), 2.64 (2H, s), 3.14-3.18 (4H, m), 3.85-3.90 (4H, m), 4.50 (2H, s), 6.93 (2H, d, J=8.6), 7.04 (2H, d, J=8.6).
I-156	91-93°C	1.24 (6H, s), 2.62 (3H, s), 2.65 (3H, s), 2.68 (2H, s), 4.53 (2H, s), 7.21-7.25 (1H, m), 7.48 (1H, t, J=7.9), 7.61 (1H, t, J=1.8), 7.74-7.78 (1H, m).

表 3 0

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-157	103.5-104.5°C	1.23 (6H, s), 2.63 (3H, s), 2.68 (2H, s), 4.50 (2H, s), 6.88-6.94 (2H, m), 7.46-7.51 (2H, m).
I-158	97-98°C	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.93-6.97 (1H, m), 7.19-7.31 (3H, m).
I-159	155.5-156.5°C	1.24 (6H, s), 2.65 (3H, s), 2.69 (2H, s), 4.54 (2H, s), 6.98-7.05 (2H, m), 7.28-7.34 (1H, m), 7.59-7.63 (1H, m).
I-160	102-106°C	1.23 (6H, s), 2.23 (3H, s), 2.64 (3H, s), 2.67 (2H, s), 4.00 (3H, s), 4.52 (2H, s), 7.01-7.05 (1H, m), 7.28 (1H, t, J=1.8), 7.37 (1H, t, J=7.8), 7.45-7.49 (1H, m).
I-161	111-112°C	1.23 (6H, s), 2.60 (3H, s), 2.65 (3H, s), 2.69 (2H, s), 4.53 (2H, s), 7.06-7.10 (2H, m), 7.97-8.03 (2H, m).
I-162	124-125°C	1.23 (6H, s), 2.23 (3H, s), 2.64 (3H, s), 2.67 (2H, s), 4.00 (3H, s), 4.52 (2H, s), 7.00-7.05 (2H, m), 7.65-7.70 (2H, m).
I-163	102-103.5°C	1.23 (6H, s), 1.32 (6H, d, J=6.3), 2.63 (2H, s), 2.64 (3H, s), 4.52 (2H, s), 4.52 (1H, sept, J=6.3), 6.90-6.98 (3H, m), 7.04-7.13 (1H, m)
I-164	90-92°C	0.94 (3H, t, J=7.3), 1.23 (6H, s), 1.58 (2H, sext, J=7.3), 2.51-2.56 (2H, m), 2.65 (3H, s), 2.65 (2H, s), 4.51 (2H, s), 6.90 (1H, dd, J=7.6, 1.3), 7.07-7.25 (3H, m)
I-165	157-158°C	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.49 (2H, s), 7.08 (1H, d, J=7.9), 7.22 (1H, d, J=7.6), 7.50-7.56 (1H, m), 7.66-7.69 (1H, m)
I-166	145-146°C	1.24 (6H, s), 2.64 (3H, s), 2.69 (2H, s), 4.51 (2H, s), 7.00-7.13 (7H, m), 7.30-7.37 (2H, m)
I-167	77-79°C	0.95 (3H, t, J=7.3), 1.23 (6H, s), 1.65 (2H, sext, J=7.3), 2.58 (2H, t, J=7.3), 2.63 (3H, s), 2.66 (2H, s), 4.51 (2H, s), 6.93-7.00 (2H, m), 7.14-7.20 (2H, m)



表 3 1

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-168	117- 118°C	1.23 (6H, s), 1.55 (9H, s), 2.63 (3H, s), 2.67 (2H, s), 4.52 (2H, s), 6.96-7.01 (2H, m), 7.37-7.42 (2H, m).
I-169	55-56°C	1.24 (6H, s), 2.65 (3H, s), 2.69 (2H, s), 4.53 (2H, s), 7.19 (1H, d, J=7.6), 7.26-7.27 (1H, m), 7.40-7.52 (2H, m).
I-170	88-90°C	1.24 (6H, s), 2.65 (3H, s), 2.69 (2H, s), 4.53 (2H, s), 7.10 (2H, d, J=8.2), 7.63 (2H, d, J=8.2).
I-171		1.15 (6H, s), 1.18 (6H, d, J=6.9), 2.17 (3H, s), 2.31 (3H, s), 2.64 (2H, s), 3.11 (1H, sept, J=6.9), 3.78 (2H, s), 6.80 (1H, d, J=8.2), 7.11-7.18 (1H, m), 7.28-7.35 (1H, m).
I-172		1.15 (6H, s), 1.18 (6H, d, J=6.9), 2.15 (3H, s), 2.31 (3H, s), 2.65 (2H, s), 3.11 (1H, sept, J=6.9), 3.78 (2H, s), 6.99 (1H, s), 7.11-7.18 (1H, m), 7.28-7.35 (1H, s).
I-173	121- 123°C	1.22 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 3.89 (3H, s), 3.89 (3H, s), 4.54 (2H, s), 6.96 (1H, d, J=8.6), 7.67 (1H, d, J=2.1), 7.87 (1H, dd, J=8.6, 2.1).
I-174	146- 147°C	1.24 (6H, s), 2.59 (2H, s), 2.65 (3H, s), 2.96-2.99 (4H, m), 3.76-3.79 (4H, m), 4.52 (2H, s), 6.98-7.17 (4H, m).
I-175	155- 157°C	1.23 (6H, s), 2.64 (3H, s), 2.66 (2H, s), 3.16-3.20 (4H, m), 3.84-3.88 (4H, m), 4.51 (2H, s), 6.54-6.57 (2H, m), 6.70-6.74 (1H, m), 7.24-7.30 (1H, m).
I-176		1.22 (6H, d, J=6.6), 1.23 (6H, s), 1.38 (3H, t, J=7.1), 2.65 (3H, s), 2.67 (2H, s), 3.08-3.18 (1H, m), 4.37 (2H, q, J=6.9), 4.52 (2H, s), 7.38 (1H, d, J=7.9), 7.59 (1H, d, J=2.0), 7.82 (1H, dd, J=8.1, 1.8).
I-177	120- 122°C	1.23 (6H, s), 1.50-1.61 (2H, m), 1.67-1.75 (4H, m), 2.62 (3H, s), 2.66 (2H, s), 3.13-3.17 (4H, m), 4.50 (2H, s), 6.92-7.02 (4H, m).
I-178	124- 125°C	1.23 (6H, s), 1.85-1.90 (4H, m), 2.62 (3H, s), 2.68 (2H, s), 3.22-3.27 (4H, m), 4.48 (2H, s), 6.74-6.80 (2H, m), 6.95-6.98 (1H, m), 7.03-7.10 (1H, m).

表 3 2

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-179		1.23 (6H, s), 2.50 (3H, s), 2.64 (3H, s), 2.67 (2H, s), 4.51 (2H, s), 6.78-6.82 (1H, m), 6.91 (1H, t, J=2.0), 7.03-7.07 (1H, m), 7.25-7.31 (1H, m).
I-180	102-103°C	1.23 (6H, s), 2.49 (3H, s), 2.63 (3H, s), 2.67 (2H, s), 4.51 (2H, s), 6.96-7.01 (2H, m), 7.27-7.31 (2H, m).
I-181	82-83°C	1.23 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 4.52 (2H, s), 7.07 (1H, dd, J=7.6, 1.7), 7.14-7.20 (1H, m), 7.25-7.34 (2H, m).
I-182		1.23 (6H, s), 2.64 (3H, s), 2.69 (2H, s), 4.52 (2H, s), 6.90 (1H, s), 6.93-7.04 (2H, m), 7.38 (1H, t, J=8.2)
I-183	68-70°C	1.24 (6H, s), 2.64 (3H, s), 2.69 (2H, s), 4.51 (2H, s), 7.01-7.07 (2H, m), 7.21-7.24 (2H, m).
I-184	169-170°C	1.25 (6H, s), 2.66 (3H, s), 2.70 (2H, s), 4.54 (2H, s), 7.13-7.18 (2H, m), 7.34-7.39 (1H, m), 7.59-7.63 (2H, m), 7.86-7.91 (1H, m), 8.58 (1H, dd, J=4.8, 1.6), 8.87 (1H, t, J=1.5)
I-185	92.5-93.5°C	1.24 (6H, s), 2.65 (3H, s), 2.69 (2H, s), 4.54 (2H, s), 7.05-7.09 (1H, m), 7.24 (1H, t, J=1.6), 7.34-7.40 (2H, m), 7.49 (1H, t, J=7.6), 7.87-7.92 (1H, m), 8.60 (1H, dd, J=4.9, 1.4), 8.87 (1H, dd, J=2.3, 0.7)
I-186		1.09 (6H, s), 2.56 (3H, s), 2.58 (2H, s), 4.20 (2H, s), 7.09-7.12 (1H, m), 7.24-7.30 (2H, m), 7.36-7.45 (2H, m), 7.75-7.79 (1H, m), 8.54 (1H, dd, J=4.9, 1.6), 8.68 (1H, dd, J=2.3, 0.7)
I-187	110.5-111.5°C	1.17 (6H, s), 2.51 (3H, s), 2.61 (2H, s), 4.33 (2H, s), 6.93-7.19 (7H, m), 7.23-7.30 (2H, m)
I-188	75-76°C	1.14 (6H, s), 1.43 (6H, t, J=7.4), 2.61 (2H, s), 3.65 (2H, s), 3.84 (3H, s), 4.08 (4H, q, J=7.4), 6.46 (1H, dd, J=8.1, 2.2), 6.52 (1H, d, J=2.2), 6.84 (1H, d, J=8.4).
I-189		1.19 (6H, s), 2.61 (2H, s), 3.65 (2H, s), 3.85 (3H, s), 3.88 (3H, s), 6.85-6.99 (3H, m), 7.02-7.15 (1H, m).

表 3 3

化 合 物 番 号	物 性	
	No	融点
NMR (CDCl <sub>3</sub> )		
I-190		1.13 (6H, s), 1.23 (3H, t, J=7.4), 2.62 (2H, s), 2.66 (2H, q, J=7.4), 3.64 (2H, s), 3.84 (3H, s), 6.84 (2H, d, J=8.6), 7.16 (2H, d, J=8.6).
I-191	45-47°C	1.14 (6H, s), 1.25 (6H, d, J = 7.0), 2.62 (2H, s), 2.91 (1H, sept, J=7.0), 3.64 (2H, s), 3.84 (3H, s), 6.86 (2H, d, J=8.6), 7.19 (2H, d, J=8.6).
I-192	93-95°C	1.15 (6H, s), 2.31 (3H, s), 2.62 (2H, s), 3.80 (2H, s), 3.85 (3H, s), 6.85-6.99 (3H, m), 7.02-7.15 (1H, m).
I-193	65-67°C	1.13 (6H, s), 1.23 (3H, t, J=7.4), 2.31 (3H, s), 2.62 (2H, s), 2.65 (2H, q, J=7.4), 3.77 (2H, s), 6.90 (2H, d, J=8.3), 7.21 (2H, d, J=8.3).
I-194	95-97°C	1.15 (6H, s), 1.24 (6H, d, J=7.0), 2.31 (3H, s), 2.64 (2H, s), 2.91 (1H, sept, J=7.0), 3.77 (2H, s), 6.90 (2H, d, J=8.6), 7.21 (2H, d, J=8.6).
I-195	94-96°C	1.15 (6H, s), 1.41 (3H, t, J=7.0), 2.31 (3H, s), 2.64 (2H, s), 3.77 (2H, s), 4.05 (2H, q, J=7.4), 6.90-6.99 (4H, m).
I-196	99-100°C	1.15 (6H, s), 1.47 (3H, t, J=7.0), 2.32 (3H, s), 2.66 (2H, s), 3.77 (2H, s), 3.88 (3H, s), 4.08 (2H, q, J=7.0), 6.52 (1H, d, J= 8.2), 6.56 (1H, d, J=2.1), 6.88 (1H, d, J=8.2) .
I-197	133-134°C	1.23 (6H, s), 1.50-1.75 (6H, m), 2.63 (3H, s), 2.65 (2H, s), 3.18 (4H, t, J=5.4), 4.51 (2H, s), 6.47-6.57 (2H, m), 6.72-6.76 (1H, m), 7.21 (1H, d, J=8.1)
I-198	124-125°C	1.17 (6H, t, J=6.9), 1.23 (6H, s), 2.61 (3H, s), 2.68 (2H, s), 3.35 (4H, q, J=6.9), 4.49 (2H, s), 6.68 (2H, d, J=8.9), 7.04 (2H, d, J=8.9)
I-199	85-87°C	1.22 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 3.89 (3H, s), 3.92 (3H, s), 4.54 (2H, s), 7.01 (1H, d, J=7.9), 7.62 (1H, d, J=1.3), 7.67 (1H, dd, J=7.9, 1.7)
I-200	137-138°C	1.23 (6H, s), 2.11-2.22 (2H, m), 2.62 (2H, t, J=7.9), 2.64 (3H, s), 2.67 (2H, s), 3.88 (2H, t, J=7.1), 4.52 (2H, s), 6.81-6.84 (1H, m), 7.30-7.50 (3H, m)

表 3 4

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-201	86.5-87.5°C	1.22 (6H, s), 2.62 (3H, s), 2.67 (2H, s), 4.50 (2H, s), 6.71 (1H, t, J=2.0), 6.76-6.82 (2H, m), 7.02-7.13 (3H, m), 7.29-7.37 (3H, m)
I-202	162-163°C	1.25 (6H, s), 2.65 (3H, s), 2.70 (2H, s), 4.54 (2H, s), 7.10-7.14 (2H, m), 7.33-7.46 (3H, m), 7.59-7.63 (4H, m)
I-203	56.5-57.5°C	1.06 (6H, s), 2.51 (3H, s), 2.59 (2H, s), 4.14 (2H, s), 7.07 (1H, dd, J=8.2, 1.3), 7.21-7.45 (8H, m)
I-204	97-99°C	1.24 (6H, s), 2.65 (3H, s), 2.68 (2H, s), 4.54 (2H, s), 7.00-7.04 (1H, m), 7.25-7.26 (1H, m), 7.33-7.48 (5H, m), 7.60-7.63 (2H, m)
I-205	95-96°C	1.21 (6H, s), 1.21 (6H, d, J=6.9), 2.61 (2H, s), 4.13 (3H, s), 4.16 (2H, s), 6.77-6.81 (1H, m), 7.13-7.16 (2H, m), 7.29-7.33 (1H, m)
I-206	128-129°C	1.18 (6H, d, J=6.9), 1.22 (6H, s), 2.63 (3H, s), 2.66 (2H, s), 2.96-3.06 (1H, m), 4.48 (2H, s), 6.67 (1H, d, J=8.2), 7.47 (1H, dd, J=8.2, 1.7), 7.59 (1H, d, J=2.0)
I-207	149-150°C	1.23 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 3.71 (8H, m), 3.86 (3H, s), 4.53 (2H, s), 6.95-7.05 (3H, m)
I-208	124-126°C	1.23 (6H, s), 2.61 (3H, s), 2.67 (2H, s), 2.96 (6H, s), 4.50 (2H, s), 6.74 (2H, d, J=8.2), 7.04 (2H, d, J=8.2).
I-209	107-109°C	1.23 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 2.96 (6H, s), 4.51 (2H, s), 6.34 (1H, d, J=2.0), 6.38 (1H, d, J=8.0), 6.54 (1H, dd, J=8.0, 2.0), 7.24 (2H, d, J=8.0).
I-210	98-99°C	1.06 (3H, t, J=7.4), 1.23 (6H, s), 2.63 (5H, s), 2.65 (3H, s), 2.99 (2H, q, J=7.4), 4.51 (2H, s), 6.98-7.10 (3H, m), 7.15-7.20 (1H, m).
I-211	94-96°C	0.84 (3H, t, J = 7.4), 1.22 (6H, s), 1.49 (2H, sext, J = 7.3), 2.63 (3H, s), 2.65 (2H, s), 2.72 (3H, s), 2.84 (2H, t, J = 7.4), 4.51 (2H, s), 6.90-7.05 (3H, m), 7.10-7.15 (1H, m).

表 3 5

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-212	98-99°C	1.02 (6H, t, J=7.4), 1.22 (6H, s), 2.61 (2H, s), 2.63 (3H, s), 3.06 (4H, q, J=7.4), 4.51 (2H, s), 6.98-7.10 (4H, m).
I-213	83-84°C	1.23 (6H, s), 2.64 (3H, s), 2.71 (2H, s), 4.57 (2H, s), 6.90-7.12 (3H, m)
I-214		1.19 (6H, d, J=6.9), 1.23 (6H, s), 2.64 (3H, s), 2.67 (2H, s), 3.06 (1H, sept, J=6.9), 4.49 (2H, s), 6.85 (1H, d, J=8.2), 7.14 (1H, dd, J=8.2, 2.3), 7.27 (1H, d, J=2.3)
I-215	83-85°C	1.23 (6H, s), 2.32 (3H, s), 2.63 (3H, s), 2.66 (2H, s), 2.71 (6H, s), 4.50 (2H, s), 6.75-6.80 (1H, m), 6.98 (1H, s), 6.97-7.00 (1H, m).
I-216	99-100°C	1.23 (6H, s), 2.33 (3H, s), 2.62 (3H, s), 2.65 (2H, s), 2.70 (6H, s), 4.50 (2H, s), 6.78 (2H, t, J=7.9), 6.91 (1H, d, J=7.9).
I-217	98-99°C	1.23 (6H, s), 2.30 (3H, s), 2.63 (3H, s), 2.64 (2H, s), 2.67 (6H, s), 4.50 (2H, s), 6.81 (1H, s), 6.92 (2H, s).
I-218	117-19°C	1.23 (6H, s), 2.63 (3H, s), 2.65 (2H, s), 2.68 (6H, s), 4.50 (2H, s), 6.89 (1H, d, J=8.5), 6.99 (1H, d, J=2.0), 7.04 (1H, dd, J=7.9, 2.0).
I-219	68-70°C	1.22 (6H, s), 2.22 (6H, s), 2.64 (3H, s), 2.66 (2H, s), 4.54 (2H, s), 6.93-6.98 (1H, m), 7.04 (2H, d, J=8.0).
I-220	97-99°C	1.22 (6H, s), 1.34 (3H, t, J=7.4), 2.64 (2H, s), 2.72 (6H, s), 3.25 (2H, q, J=7.4), 4.47 (2H, s), 6.94-7.05 (3H, m), 7.15-7.20 (1H, m).
I-221	118-119°C	1.22 (6H, s), 1.34 (3H, t, J=7.4), 2.64 (2H, s), 2.95 (6H, s), 3.25 (2H, q, J=7.4), 4.47 (2H, s), 6.34 (1H, d, J=7.5), 6.38 (1H, s), 6.52 (1H, d, J=7.5), 7.24 (1H, t, J=7.5).
I-222	74-76°C	1.22 (6H, s), 1.34 (3H, t, J=7.4), 2.33 (3H, s), 2.63 (2H, s), 2.70 (6H, s), 3.25 (2H, q, J=7.4), 4.47 (2H, s), 6.78 (1H, d, J=7.5), 6.82 (1H, s), 6.91 (1H, t, J=7.5).

表 3 6

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-223		1.22 (6H, s), 1.25 (6H, d, J=7.0), 1.34 (3H, t, J=7.4), 2.65 (2H, s), 2.91 (1H, sept, J=7.0), 3.25 (2H, q, J=7.4), 4.50 (2H, s), 6.98 (2H, d, J=8.2), 7.28 (2H, d, J = 8.2).
I-224		1.21 (6H, s), 2.62 (3H, s), 2.66 (2H, s), 2.97 (3H, d, J=4.9), 3.84 (3H, s), 4.51 (2H, s), 6.66 (1H, brs), 6.96 (1H, d, J=7.9), 7.30-7.33 (1H, m), 7.49 (1H, d, J=1.3)
I-225	69-71°C	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.52 (2H, s), 6.49 (1H, t, J=74.6), 7.04-7.26 (4H, m)
I-226		1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.51 (2H, s), 6.50 (1H, t, J=74.2), 7.00-7.05 (2H, s), 7.11-7.16 (2H, m)
I-227	81-83°C	1.17 (6H, t, J=7.0), 1.23 (6H, s), 2.63 (3H, s), 2.66 (2H, s), 3.35 (4H, q, J=7.0), 4.52 (2H, s), 6.29 (1H, s), 6.30 (1H, d, t, J=8.2, 2.3), 6.49 (1H, dd, J=8.2, 2.3), 7.19 (1H, t, J=8.2).
I-228	106-107°C	1.21 (6H, s), 2.61 (3H, s), 2.64 (2H, s), 2.70 (6H, s), 4.47 (2H, s), 6.90 (2H, s), 6.93 (1H, s).
I-229	121-122°C	1.23 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 2.70 (6H, s), 4.48 (2H, s), 6.50-6.70 (2H, m), 6.93 (1H, dd, J=8.5, 6.2).
I-230	85-86°C	1.21 (6H, s), 2.63 (3H, s), 2.64 (2H, s), 2.66 (6H, s), 4.49 (2H, s), 6.74-6.79 (2H, m), 6.93-6.98 (1H, m).
I-231	82-84°C	1.23 (6H, s), 1.25 (3H, t, J=7.6), 2.62 (3H, s), 2.66 (2H, s), 2.67 (2H, q, J=7.6), 2.71 (6H, s), 4.50 (2H, s), 6.80 (1H, d, J=7.6), 6.84 (1H, s), 6.93 (1H, d, J=7.6).
I-232	75-76°C	1.22 (3H, t, J=7.6), 1.23 (6H, s), 2.60 (2H, q, J=7.6), 2.63 (3H, s), 2.64 (2H, s), 2.68 (6H, s), 4.50 (2H, s), 6.83 (1H, s), 6.93 (2H, s).
I-233	86-88°C	1.22 (6H, s), 1.33 (3H, t, J=7.4), 2.64 (2H, s), 2.71 (6H, s), 3.24 (2H, q, J=7.4), 4.47 (2H, s), 6.92 (2H, s), 6.94 (1H, s).

表 3 7

化合物 番号	物性	
No	融点	NMR (CDCl <sub>3</sub> )
I-234	70-71°C	1.22 (6H, s), 1.34 (3H, t, J=7.4), 2.64 (2H, s), 2.71 (6H, s), 3.25 (2H, q, J=7.4), 4.46 (2H, s), 6.60-6.68 (2H, m), 6.92-6.94(1H, m).
I-235	80-82°C	1.22 (6H, s), 1.24 (3H, t, J=7.6), 1.33 (3H, t, J=7.4), 2.60 (2H, q, J=7.6), 2.61 (2H, s), 2.71 (6H, s), 3.24 (2H, q, J=7.4), 4.47 (2H, s), 6.81 (1H, d, J=7.6), 6.94(1H, s), 6.94 (1H, d, J=7.6).
I-236		1.03 (3H, t, J=7.3), 1.20 (6H, d, J=6.9), 1.23 (6H, s), 1.40 (3H, d, J=6.9), 1.61-1.89 (2H, m), 2.63 (2H, s), 3.15 (1H, sept, J=6.9), 3.95 (1H, q, J=6.9), 4.47 (2H, s), 6.89-6.92 (1H, m), 7.13-7.20 (2H, m), 7.31-7.34 (1H, m)
I-237		1.05 (6H, d, J=6.6), 1.21 (6H, d, J=6.6), 1.23 (6H, s), 1.98-2.08 (1H, m), 2.64 (2H, s), 3.16 (1H, sept, J=6.6), 3.20 (2H, d, J=6.6), 4.49 (2H, s), 6.88-6.92 (1H, m), 7.13-7.22 (2H, m), 7.30-7.35 (1H, m)
I-238	102-104°C	1.20 (6H, d, J=6.9), 1.22 (6H, s), 2.61 (2H, s), 2.85-2.95 (1H, m), 3.19 (3H, d, J=4.6), 4.46 (2H, s), 6.73-6.79 (1H, m), 7.14-7.20 (2H, m), 7.29-7.34 (1H, m), 12.40 (1H, brs)
I-239	58-60°C	1.23 (6H, s), 2.17 (3H, s), 2.64 (3H, s), 2.65 (2H, s), 2.70 (6H, s), 4.52 (2H, s), 6.63 (1H, d, J=7.9), 6.87 (1H, d, J=7.9), 7.14 (1H, d, J=7.9).
I-240	100-101°C	1.23 (6H, s), 2.62 (3H, s), 2.64 (2H, s), 2.78 (6H, s), 3.89 (3H, s), 4.52 (2H, s), 6.60-6.70 (2H, m), 6.94 (1H, d, J=7.9).
I-241	82-83°C	1.23 (6H, s), 2.30 (3H, s), 2.63 (3H, s), 2.65 (2H, s), 2.70 (6H, s), 4.52 (2H, s), 6.63 (1H, d, t, J=7.9, 1.9), 6.70 (1H, d, J=1.9), 7.14 (1H, d, J=7.9).
I-242	99-100°C	1.23 (6H, s), 2.63 (3H, s), 2.68 (2H, s), 2.81 (6H, s), 4.50 (2H, s), 6.91 (1H, d, t, J=8.4, 2.6), 7.06 (1H, d, J=8.4), 7.14 (1H, d, J=2.6).
I-243	63-64°C	1.23 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 2.78 (6H, s), 3.89 (3H, s), 4.52 (2H, s), 6.67 (1H, s), 6.70 (1H, d, J=7.9), 6.81 (1H, d, J=7.9).
I-244	68-70°C	0.88 (6H, t, J=7.5), 1.22 (6H, d, J=6.9), 1.35 (3H, t, J=7.4), 1.50-1.70 (4H, m), 2.61 (2H, s), 3.15 (1H, sept, J=6.9), 3.29 (2H, q, J=7.4), 4.44 (2H, s), 6.89-6.92 (1H, m), 7.08-7.21 (2H, m), 7.30-7.35 (1H, m).

表 3 8

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-245	81-82°C	1.14 (6H, s), 1.20 (6H, d, J=6.9), 2.63 (2H, s), 3.06 (2H, s), 3.08 (1H, sept, J=6.9), 3.18 (3H, s), 6.74 (1H, dd, J=7.3, 1.7), 6.98-7.10 (2H, m), 7.20-7.24 (1H, m)
I-246	47-49°C	0.95 (3H, t, J=7.3), 1.13 (6H, s), 1.20 (6H, d, J=6.9), 1.55-1.74 (2H, m), 2.62 (2H, s), 3.03-3.11 (3H, m), 3.52-3.57 (2H, m), 6.73 (1H, dd, J=7.6, 1.7), 6.96-7.10 (2H, m), 7.21 (1H, dd, J=7.3, 1.7)
I-247	68-70°C	1.11 (6H, s), 1.18 (6H, d, J=6.9), 1.19 (6H, d, J=6.9), 2.56 (2H, s), 2.89 (2H, s), 3.08 (1H, sept, J=6.9), 5.08 (1H, sept, J=6.9), 6.73 (1H, dd, J=7.9, 1.7), 6.99-7.10 (2H, m), 7.21 (1H, dd, J=7.9, 1.7)
I-248		0.97 (6H, d, J=6.9), 1.14 (6H, s), 1.18 (6H, d, J=6.9), 2.05-2.15 (1H, m), 2.62 (2H, s), 3.07 (2H, s), 3.08 (1H, sept, J=6.9), 3.44 (2H, d, J=7.6), 6.71 (1H, dd, J=7.6, 1.7), 6.96-7.09 (2H, m), 7.21 (1H, dd, J=7.6, 1.7)
I-249	96-97°C	1.23 (6H, s), 2.64 (3H, s), 2.68 (2H, s), 4.59 (2H, s), 7.04 (1H, d, J=7.3), 7.41-7.50 (3H, m), 7.67 (1H, d, J=7.3), 7.87 (1H, dd, J = 7.3, 2.1), 8.05 (1H, d, J=7.3, )
I-250	108-109°C	1.24 (6H, s), 2.67 (3H, s), 2.69 (2H, s), 4.59 (2H, s), 7.15 (1H, d, J=7.3), 7.41 (1H, q, J=7.3), 7.69 (1H, t, J=8.4), 7.91 (1H, d, J=7.3), 8.45 (1H, d, J=8.4), 8.92-8.95 (1H, m).
I-251	105-107°C	1.22 (6H, s), 2.62 (3H, s), 2.65 (2H, s), 3.97 (3H, s), 4.53 (2H, s), 6.87-6.90 (1H, m), 7.25-7.30 (1H, m), 7.96-7.99 (1H, m).
I-252	132-133°C	1.23 (6H, s), 2.63 (3H, s), 2.68 (2H, s), 2.92 (3H, s), 4.49 (2H, s), 6.73-6.78 (1H, m), 7.20-7.23 (1H, m), 8.05-8.07 (1H, m)
I-253	118-120°C	1.23 (6H, s), 2.60 (3H, s), 2.63 (2H, s), 4.52 (2H, s), 7.30 (2H, s), 8.12 (1H, s).
I-254	112-113°C	1.23 (6H, s), 2.63 (3H, s), 2.69 (2H, s), 3.94 (3H, s), 4.51 (2H, s), 6.76 (1H, d, J = 8.1), 7.35 (1H, dd, J = 8.1, 2.1), 7.92 (1H, d, J = 2.1).
I-255	109-110°C	1.23 (6H, s), 1.40 (3H, t, J=7.0), 2.62 (3H, s), 2.66 (2H, s), 4.38 (2H, q, J=7.0), 4.51 (2H, s), 6.75 (1H, d, J= 8.1), 7.35 (1H, dd, J=8.1, 2.1), 7.90 (1H, d, J=2.1).



表 3 9

物性		
No	融点	NMR (CDCl <sub>3</sub> )
I-256	75-76°C	1.03 (3H, t, J=7.6), 1.22 (6H, s), 1.76 (2H, sext, J= 7.6), 2.63 (3H, s), 2.65 (2H, s), 4.24 (2H, t, J=7.6), 4.51 (2H, s), 6.76 (1H, d, J=8.1), 7.35 (1H, dd, J=8.1, 2.1), 7.92 (1H, d, J=2.1).
I-257	74-76°C	1.24 (6H, s), 1.36 (6H, d, J=6.3), 2.63 (3H, s), 2.70 (2H, s), 4.51 (2H, s), 5.28 (1H, sept, J=6.3), 6.70 (1H, d, J=8.1), 7.32 (1H, dd, J=8.1, 2.1), 7.92 (1H, d, J=2.1).
I-258	102-104°C	1.23 (6H, s), 2.58 (3H, s), 2.63 (2H, s), 2.69 (3H, s), 4.51 (2H, s), 7.20-7.26 (2H, m), 8.21 (1H, d, J=2.1).
I-259	81-83°C	1.23 (6H, s), 1.38 (3H, t, J=7.3), 2.63 (3H, s), 2.63 (2H, s), 3.18 (2H, q, J=7.3), 4.51 (2H, s), 7.15-7.26 (2H, m), 8.21 (1H, d, J=2.1).
I-260	78-79°C	1.05 (3H, t, J = 7.4), 1.23 (6H, s), 1.75 (2H, sext, J=7.3), 2.63 (3H, s), 2.65 (2H, s), 3.15 (2H, t, J=7.4), 4.51 (2H, s), 7.15-7.26 (2H, m), 8.20 (1H, d, J=2.1).
I-261	102-103°C	1.23 (6H, s), 1.40 (6H, d, J=6.6), 2.63 (3H, s), 2.66 (2H, s), 4.00 (1H, sept, J=6.6), 4.51 (2H, s), 7.15-7.26 (2H, m), 8.22 (1H, d, J=2.1).
I-262	109-110°C	1.22 (6H, s), 2.61 (3H, s), 2.65 (2H, s), 2.70 (6H, s), 3.80 (3H, s), 4.48 (2H, s), 6.47 (1H, dd, J=7.9, 2.1), 6.56 (1H, d, J=2.1), 6.95 (1H, d, J=7.9).
I-263	99-100°C	1.22 (6H, s), 2.62 (3H, s), 2.63 (2H, s), 2.64 (6H, s), 3.78 (3H, s), 4.48 (2H, s), 6.59 (1H, d, J=2.1), 6.64 (1H, dd, J=7.9, 2.1), 6.98 (1H, d, J=7.9).
I-264	114-115°C	0.98 (6H, t, J=7.0), 1.23 (6H, s), 2.16 (3H, s), 2.63 (3H, s), 2.64 (2H, s), 2.98 (4H, q, J=7.0), 4.52 (2H, s), 6.65 (1H, d, J=7.9), 6.89 (1H, d, J=7.9), 7.13 (1H, t, J=7.9).
I-265	66-67°C	0.98 (6H, t, J=7.0), 1.23 (6H, s), 2.16 (3H, s), 2.63 (3H, s), 2.64 (2H, s), 2.98 (4H, q, J=7.0), 4.52 (2H, s), 6.63 (1H, dd, J=7.9, 2.1), 6.70 (1H, d, J=2.1), 7.16 (1H, d, J = 7.9).
I-266	88-90°C	1.04 (6H, t, J=7.0), 1.24 (6H, s), 2.63 (3H, s), 2.67 (2H, s), 3.17 (4H, q, J=7.0), 3.86 (3H, s), 4.51 (2H, s), 6.67 (1H, s), 6.70 (1H, d, J=7.9), 6.85 (1H, d, J=7.9).

表 4 0

化 合 物 番 号	物 性	
No	融点	NMR (CDCl <sub>3</sub> )
I-267	138-140°C	0.82-0.92 (9H, m), 1.18 (3H, d, J=6.9), 1.51-1.65 (6H, m), 2.62 (2H, s), 2.65 (3H, s), 2.87 (1H, sept, J=6.9), 4.33 (1H, d, J=13.5), 4.59 (1H, d, J=13.5), 6.89-6.92 (1H, m), 7.13-7.28 (3H, m)
I-268	161-163°C	0.89-0.95 (6H, m), 1.21 (6H, d, J=6.9), 1.25-1.54 (8H, m), 2.62 (2H, s), 2.65 (3H, s), 3.10 (1H, sept, J=6.9), 4.47 (2H, s), 6.88-6.92 (1H, m), 7.14-7.18 (2H, m), 7.31-7.34 (1H, m)
I-269		1.21 (6H, d, J=6.9), 1.65-1.88 (8H, m), 2.64 (3H, s), 2.75 (2H, s), 3.09 (1H, sept, J=6.9), 4.57 (2H, s), 6.90-6.94 (1H, m), 7.13-7.20 (2H, m), 7.30-7.35 (1H, m)
I-270		1.21 (6H, d, J=6.9), 1.37-1.54 (8H, m), 1.76-1.80 (2H, m), 2.65 (3H, s), 2.67 (2H, s), 3.09 (1H, sept, J=6.9), 4.54 (2H, s), 6.89 (1H, m), 7.11-7.21 (2H, m), 7.29-7.34 (1H, m)